UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX

In the Matter of:	)	
	)	U.S. EPA
Intel Corporation,	)	Docket No. 2011-08
Respondent	)	
	)	
	)	
	)	
Proceeding under §106(a) of the Comprehensive	)	
Environmental Response, Compensation, and	)	
Liability Act of 1980, as amended	)	
42 U.S.C. § 9606(a)	)	

ADMINISTRATIVE ORDER FOR REMEDIAL DESIGN AND REMEDIAL ACTION

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I. INTRODUCTION AND JURISDICTION

1. This order directs Respondent to implement a remedial action for the remedy described in the *Record of Decision Amendment, Intel Santa Clara 3 Superfund Site* (ROD Amendment), dated September 7, 2010 which amended the *1990 Intel Corp. Record of Decision* (1990 ROD), for the Intel Santa Clara 3 site (Site) in Santa Clara, California.

2. This Order is issued to Respondent by the United States Environmental Protection Agency (EPA) under the authority vested in the President of the United States by section 106(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (CERCLA), 42 U.S.C. § 9606(a). This authority was delegated to the Administrator of EPA on January 23, 1987, by Executive Order 12580 (52 Fed. Reg. 2926, January 29, 1987), and was further delegated to EPA Regional Administrators on May 11, 1994, by EPA Delegation No. 14-14-B. The Regional Administrator of Region IX further delegated the authority to the respective Superfund Branch Chief, now referred to as an Assistant Director, by Region IX Delegation No. R9 1290.14A, dated November 16, 2001.

3. EPA has informed Respondent that it has determined that issuance of a unilateral administrative order for groundwater remediation is appropriate in order to modify the remedial action to be conducted at the Site. However, issuance of this Order for groundwater remediation shall not be construed as limiting or in any way narrowing the rights of the United States to pursue the Respondent for further response costs related to or to compel the performance of groundwater remediation at the Site.

4. This Order implements the ROD Amendment, which makes modifications to the remedial action reflected in 1990 ROD. The scope of Work is put forth in the Statement of Work (SOW) included as Appendix A to this Order, which is incorporated by reference into this Order and is an enforceable part of this Order.

5. After discussing the SOW with EPA, Respondent has indicated its willingness to implement the SOW and ROD Amendment according to this Order.

II. FINDINGS OF FACT

6. Intel Santa Clara 3 is approximately one acre in size and located in Santa Clara, CA. The Site consists of a low-rise building and landscaping and parking areas. The building at the Site was constructed in 1975 and was used from 1976 to 2008 for performing quality control of chemicals and electrical testing of semiconductors.

7. From on or about 1975 until 2009, former owner and operator, Intel Corporation (Intel or Respondent) was the owner and operator of the Site. During that time, hazardous substances, including some or all of those described in this section, came to be located at the Site.

8. On or about April 2010, Intel sold the Site to Siren Data SC-3, LLC.

9. Groundwater extraction and treatment at the Site began in 1985.

10. In 1986, EPA placed Intel Santa Clara 3 on the National Priorities List, set forth at 40 C.F.R. Part 300, Appendix B.

11. The contaminants found in groundwater at the Site during the initial investigation included trichloroethylene (TCE); 1,1,1-tricholorethane (1,2 DCA): 1,1-dichloroethylene (1,1 DCE); 1,1-dichloroethane (1,1-DCA); 1,2-dichloroethane (1,2-DCA); cis 1,2 dichloroethylene (cis 1,2-DCE); trans 1,2 dichloroethylene (trans 1,2-DCE); Freon 113; and Freon 11. The ROD did not select cleanup actions for soils because investigations demonstrated that soils did not contain contaminants at levels of concern.

12. Pursuant to section 117 of CERCLA, 42 U.S.C. § 9617, EPA published a notice of the completion of the Remedial Investigation and Feasibility Study (RI/FS) for the Site and the proposed plan for the remedial action on April 18, 1990. On July 18, 1990, The Regional Water Quality Control Board issued Order No. 90-105 (Board Order), which prescribed the site cleanup requirements for the Site. EPA signed the original Record of Decision for the initial remedial action on September 20, 1990. The Regional Water Quality Control Board acted as the lead agency for oversight of the implementation of the remedy until 2006.

13. The Board Order required Respondent to extract groundwater until drinking water standards were achieved if feasible. If achieving drinking water standards was infeasible, Respondent was required to continue to extract groundwater as long as significant quantities of chemicals were being removed through groundwater extraction. In addition, the Board Order required Respondent to treat the contaminated groundwater before discharging it, to install an additional extraction well, to plan for intermittent pumping to improve the efficiency of the pumping, to monitor the groundwater quarterly, and to place a deed restriction on the property that prohibited the use of on-site shallow groundwater.

14. A third extraction well was added in 1990.

15. In 1991, the cyclic pumping trial specified by the ROD was begun because the efficiency of the system at removing contamination was declining. Though VOC concentrations continued to decline, no significant increase in overall contaminant removal was obtained by changing the pumping scheme.

16. In 1994, the groundwater extraction and treatment system had been operating for about nine years and had treated approximately 45 million gallons of groundwater, removing about 28 pounds of TCE. Because the system had removed most of the contaminant mass and was no longer removing significant levels of contaminants, the Regional Water Quality Control Board approved cessation of groundwater extraction and allowed Intel to

implement a trial monitoring natural attenuation program.

17. EPA assumed oversight of the Intel Santa Clara 3 Site in 2006.

18. In January 2008, Respondent recorded an environmental restriction for the Site. The environmental restriction, among other actions, prohibits the construction or use of a well for extracting water for any use, unless permitted by the Regional Water Quality Control Board.

19. Although most of the chemicals originally found at the Site are no longer detectable above laboratory limits due to past remedial action, TCE continues to be present above cleanup standards. The maximum concentration of TCE found at the Site in 2010 was 11 µg/L, and the groundwater cleanup standard, or the maximum contaminant level (MCL) is 5 µg/L.

20. EPA released the Proposed Plan for the ROD Amendment for the Site on May 5, 2010. The public comment period began on May 5, 2010 and ended on June 4, 2010. EPA held a public meeting on May 19, 2010 at the Santa Clara Public Library. EPA received only one comment during the public comment period, which was from the Regional Water Quality Control Board concurring with the ROD Amendment.

21. EPA's determination of the remedial action to be implemented at the Intel Santa Clara 3 Site is embodied in the final ROD Amendment, executed on September 7, 2010. The ROD Amendment is attached to this Order as Appendix B and is incorporated by reference. The ROD Amendment is supported by an administrative record that contains the documents and information upon which EPA based the selection of the response action.

22. Consumption of contaminated groundwater at the Site could have significant human health impacts because the concentration of TCE located in the groundwater at the Site is more than two times the respective drinking water standard. According to the Agency for Toxic Substances and Disease Registry, drinking high levels of TCE may cause nervous system effects, liver and lung damage, abnormal heartbeat, and/or coma. Drinking small amounts over a long period of time may cause liver and kidney damage, impaired immune system function, and impaired fetal development in pregnant women. The National Toxicology Program determined that TCE is "reasonably anticipated to be a human carcinogen."

23. There are no complete exposure pathways currently threatening human health or the environment at the Site. However, the State of California has designated the groundwater beneath the Site as a potential drinking water source. The Site overlies the Santa Clara Valley groundwater basin, which provides up to 50% of the municipal drinking water for over 1.4 million people of the Santa Clara Valley.

24. The ROD Amendment will address the remaining TCE contamination in the groundwater through monitored natural attenuation (MNA). MNA will rely on naturally occurring

physical, chemical, or biological processes that act without human intervention to reduce the mass, toxicity, mobility, volume, or concentrations of contaminants in soil or groundwater. Although it may take several years or decades to reach the MCL for TCE (5 µg/L), the approach is effective in the short term because there are no complete exposure pathways at the Site, the plume is not migrating, and the land use covenant currently in place prohibits production wells except for monitoring and other testing.

25. The expected outcome of the remedy is the restoration of the shallowest groundwater at the Site to the quality required by its State-designated beneficial use as a potential source of drinking water. Specifically, TCE concentrations in the groundwater are expected to decrease below the MCLs within a few years or decades.

III. CONCLUSIONS OF LAW AND DETERMINATIONS

26. The Intel Santa Clara 3 site is a "facility" as defined in Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

27. Respondent is a "person" as defined in Section 101(21) of CERCLA, 42 U.S.C. § 9601(2).

28. Respondent is a "liable party" as defined in Section 107(a) of CERCLA, 42 U.S.C. § 9607(1), and is subject to this Order under Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

29. The substance listed in Paragraph 19, TCE, is found at the Site and is a "hazardous substance, as defined in Section 101(14) of CERCLA, 42 U.S.C. § 9601(14).

30. This hazardous substance has been released from the Site into the groundwater.

31. The past and present disposal and migration of a hazardous substance from the Site is a "release" as defined in Section 101(22) of CERCLA, 42 U.S.C. § 9601(22).

32. Actual or threatened releases of hazardous substances to and in groundwater at the Site may present an imminent and substantial endangerment to public health, welfare, or the environment. The actions required by this Order are necessary to protect the public health, welfare, and the environment.

33. The contamination and endangerment at this Site constitute an indivisible injury.

IV. NOTICE TO THE STATE

34. On December 10, 2010, prior to issuing this Order, EPA notified the State of California, California Regional Water Quality Control Board, San Francisco Bay Region, that EPA would be issuing this Order.

V. ORDER

35. Based on the foregoing, Respondent is hereby ordered to comply with the following provisions, including but not limited to all appendices to this Order, and all schedules and deadlines in this Order, attached to this Order, or incorporated by reference into this Order.

VI. DEFINITIONS

36. Unless otherwise expressly provided herein, terms used in this Order, which are defined in CERCLA or in regulations promulgated under CERCLA, shall have the meaning assigned to them in the statute or its implementing regulations. Whenever terms listed below are used in this Order, in the documents attached to this Order, or incorporated by reference into this Order, the following definitions shall apply:

    a. "CERCLA" shall mean the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. § 9601 *et seq.*

    b. "Day" shall mean a calendar day, unless expressly stated to be a working day. "Working day" shall mean a day other than a Saturday, Sunday, or Federal holiday. In computing any period of time under this Order, where the last day would fall on a Saturday, Sunday, or Federal holiday, the period shall run until the end of the next working day.

    c. "EPA" shall mean the United States Environmental Protection Agency.

    d. "State agency" shall mean the California Regional Water Quality Control Board, San Francisco Region.

    e. "National Contingency Plan" or "NCP" shall mean the National Contingency Plan promulgated pursuant to section 105 of CERCLA, 42 U.S.C. § 9605, codified at 40 C.F.R. Part 300, including any amendments thereto.

    f. "Paragraph" shall mean any portion of this Order indentified with an Arabic numeral.

    g. "Performance Standards" shall mean those cleanup standards, standards of control, and other substantive requirements, criteria or limitations, identified in the ROD Amendment and Statement of Work, that the Remedial Action and Work required by this Order must attain and maintain.

    h. "Record of Decision Amendment" or "ROD Amendment" shall mean the EPA Record of Decision relating to the Site, signed on September 7, 2010 by the Assistant Director of the Superfund Division, and all attachments thereto.

i. "Remedial Action" or "RA" shall mean those activities to be undertaken by Respondent to implement the Statement of Work and the Groundwater Monitoring Plan submitted by Respondent and approved by EPA, including any additional activities required under Sections X, XI, XII, XIII, and XIV of this Order.

j. "Response Costs" shall mean all costs, including direct costs, indirect costs, and accrued interest incurred by the United States and the State to perform or support response actions at the Site. Response costs include but are not limited to the costs of overseeing the Work, such as the costs of reviewing or developing plans, reports and other items pursuant to this Order and costs associated with verifying the Work.

k. "Statement of Work" or "SOW" shall mean the statement of work for implementation of the Remedial Action at the Site, as set forth in Appendix A to this Order. The Statement of Work is incorporated into this Order and is an enforceable part of this Order.

l. "Section" shall mean a portion of this Order indentified by a roman numeral and includes one or more paragraphs.

m. "Site" shall mean the Intel Santa Clara 3 Superfund site, encompassing approximately 1 acre, located at 2880 Northwestern Parkway in Santa Clara, County of Santa Clara, as described in the Record of Decision.

n. "State" shall mean the State of California.

o. "United States" shall mean the United States of America.

p. "Work" shall mean all activities Respondent is required to perform under this Order, including Remedial Action and any activities required to be undertaken pursuant to Section VII through XXIV of this Order.

VII. NOTICE OF INTENT TO COMPLY

37. Respondent shall provide, not later than five (5) days after the effective date of this Order, written notice to EPA's Remedial Project Manager (RPM) stating whether it will comply with the terms of this Order. If Respondent does not unequivocally commit to perform the RA as provided by this Order, if shall be deemed to have violated this Order and to have failed or refused to comply with this Order. Respondent's written notice shall describe, using facts that exist on or prior to the effective date of this Order, any "sufficient cause" defenses asserted by Respondent under sections 106(b) and 107(c)(3) of CERCLA. The absence of a response by EPA to the notice required by this paragraph shall not be deemed to be acceptance of Respondent's assertions.

VIII. PARTIES BOUND

38. This Order shall apply to and be binding upon the Respondent, its directors, officers, employees, agents, successors, and assigns. No change in the ownership, corporate status, or other control of the Respondent shall alter any of the Respondent's responsibilities under this Order.

39. Respondent shall provide a copy of this Order to any prospective owners or successors before a controlling interest in Respondent's assets, property rights, or stock are transferred to the prospective owner or successor. Respondent shall provide a copy of this Order to each contractor, sub-contractor, laboratory, or consultant retained to perform any Work under this Order, within five (5) days after the effective date of this Order or on the date such services are retained, whichever date occurs later. Respondent shall also provide a copy of this Order to each person representing any Respondent with respect to the Site or the Work and shall condition all contracts and subcontracts entered into hereunder upon performance of the Work in conformity with the terms of this Order. With regard to the activities undertaken pursuant to this Order, each contractor and subcontractor shall be deemed to be related by contract to the Respondent within the meaning of Section 107(b)(3) of CERCLA, 42 U.S.C. § 9607(b)(3). Notwithstanding the terms of any contract, Respondent is responsible for compliance with this Order and for ensuring that its contractors, subcontractors, and agents comply with this Order, and perform any Work in accordance with this Order.

IX. WORK TO BE PERFORMED

40. Respondent shall cooperate with EPA in providing information regarding the Work to the public. As requested by EPA, Respondent shall participate in the preparation of such information for distribution to the public and in public meetings which may be held or sponsored by EPA to explain activities at or relating to the Site.

41. All aspects of the Work to be performed by Respondent pursuant to this Order shall be under the direction and supervision of a qualified project manager the selection of which shall be subject to approval by EPA. EPA is aware that Tom Cooper, Corporate Water Programs Manager, has served as the project manager for the Site, and EPA hereby approves of Mr. Cooper continuing as project manager.

42. If at any time Respondent proposes to use a different project manager, Respondent shall notify EPA and shall obtain approval from EPA before the new project manager performs any work under this Order. Respondent shall notify EPA in writing of the name and qualifications of the proposed project manager, including primary support entities and staff, proposed to be used in carrying out work under this Order. With respect to any proposed project manager, Respondent shall demonstrate that the proposed project manager has a quality system that complies with ANSI/ASQC E4-1994, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs," (American National Standard, January 5, 1995), by submitting a copy of the proposed project manager's Quality Management Plan

(QMP). The QMP should be prepared in accordance with the specifications set forth in "EPA Requirements for Quality Management Plans (QA/R-2)," (EPA/240/B-01/002, March 2001) or equivalent documentation as determined by EPA.

43. EPA will review Respondent's selection of a project manager according to the terms of this paragraph and Section XIV of this Order. If EPA disapproves of the selection of the project manager, Respondent shall submit to EPA within thirty (30) days after receipt of EPA's disapproval of the project manager previously selected, a list of project managers, including primary support entities and staff that would be acceptable to Respondent. EPA will thereafter provide written notice to Respondent of the names of the project managers that are acceptable to EPA. Respondent may then select any approved project manager from that list and shall notify EPA of the name of project manager selected within twenty-one (21) days of EPA's designation of approved project managers.

44. The Work conducted by the Respondent under this Order shall be consistent with EPA's Remedial Design/Remedial Action (RD/RA) Handbook, OSWER Guidance 9355.0-04B.

a. Remedial Design

45. No remedial design is required because a suitable network of groundwater monitoring wells is already in place at the Site.

b. Remedial Action

46. No later than thirty (30) days after the effective date of this Order, Respondent shall submit a Remedial Action Workplan (Groundwater Monitoring Plan) to EPA for review and approval. The Groundwater Monitoring Plan shall be developed in accordance with the ROD Amendment and the attached Statement of Work. The Groundwater Monitoring Plan shall include, at least the following: (1) a Field Sampling and Analysis Plan (FSAP); (2) a Quality Assurance Project Plan (QAPP); (4) a Contingency Plan; and (3) a schedule for investigation, sampling, analysis, and reporting activities.

47. Respondent shall also submit to EPA for review, no later than 30 days after the effective date of this Order, a Health and Safety Plan for field activities required by the Statement of Work and Groundwater Monitoring Plan. The Health and Safety Plan for field activities shall conform to applicable Occupations Safety and Health Administration and EPA requirements, including but not limited to the regulations at 54 Fed. Reg. 9294.

48. Upon approval by EPA, the Groundwater Monitoring Plan is incorporated into this Order as a requirement of this Order and shall be an enforceable part of this Order.

49. Upon approval of the Groundwater Monitoring Plan by EPA, Respondent shall implement the Groundwater Monitoring Plan according to the schedules in the Groundwater Monitoring Plan.

50. EPA is aware that Respondent has contracted with Stellar Environmental Solutions to implement this Remedial Action. EPA hereby approves of Respondent's selection of Stellar Environmental Services as a contractor to carry out work under this Order.

51. If at any time Respondent decides to change contractors, Respondent shall notify EPA in writing of the name, title, and qualifications of any contractor proposed to be used in carrying out work under this Order. If EPA disapproves of the selection of any contractor, Respondent shall submit a list of contractors that would be acceptable to them to EPA within thirty (30) days after receipt of EPA's disapproval of the contractor previously selected. EPA shall thereafter provide written notice of the name(s) of the contractor(s) it approves, if any. Respondent may select any approved contractor from that list and shall notify EPA of the name of the contractor selected within twenty-one (21) days of EPA's designation of approved contractors. If at any time Respondent proposes to change the contractor, Respondent shall notify EPA and shall obtain approval from EPA as provided in this paragraph, before the new contractor performs any work under this Order.

52. The Work performed by Respondent pursuant to this Order shall, at a minimum, achieve the Performance Standards specified in the ROD Amendment and in Section III of the Statement of Work.

53. Notwithstanding any action by EPA, Respondent remains fully responsible for achievement of the Performance Standards in the ROD Amendment and Statement of Work. Nothing in this Order, the Statement of Work, the Groundwater Monitoring Plan, or approval of any other submission, shall be deemed to constitute a warranty or representation of any kind by EPA that full performance of the Remedial Action will achieve the Performance Standards set forth in the ROD Amendment and in Section III of the Statement of Work. Respondent's compliance with such approved documents does not foreclose EPA from seeking additional work to achieve the applicable performance standards.

54. Respondent may ship waste material from the Site to an off-Site facility only if they verify, prior to any shipment, that the off-Site facility is operating in compliance with the requirements of Section 121(d)(3) of CERCLA, 42 U.S.C. § 9621(d)(3) and 40 C.F.R. § 300.440, by obtaining a determination from EPA that the proposed receiving facility is operating in compliance with 42 U.S.C. § 9621(d)(3) and 40 C.F.R. § 300.440.

55. Respondent shall, prior to any off-Site shipment of hazardous substances from the Site to an out-of-state waste management facility, provide written notification to the appropriate state environmental official in the receiving state and to EPA's RPM of such shipment of hazardous substances. However, the notification of shipments shall not apply to any off-Site shipments when the total volume of all shipments from the Site to the State will not exceed ten (10) cubic yards.

    a. The notification shall be in writing, and shall include the following information, where available: (1) the name and location of the facility to which the hazardous

substances are to be shipped; (2) the type and quantity of the hazardous substances to be shipped; (3) the expected schedule for the shipment of the hazardous substances; and (4) the method of transportation. Respondent shall notify the receiving state of major changes in the shipment plan, such as a decision to ship the hazardous substances to another facility within the same state, or to a facility in another state.

b. The identity of the receiving facility and state will be determined by Respondent following the award of the contract for Remedial Action construction. Respondent shall provide all relevant information, including information under the categories noted in Paragraph 55.a above, on the off-Site shipments as soon as practicable after the award of the contract and before the hazardous substances are actually shipped.

56. Within thirty (30) days after Respondent concludes that the Remedial Action has been fully performed, including that all the Performance Standards have been attained, Respondent shall submit to EPA a written report by respondent's Project Coordinator certifying that the Work has been completed in full satisfaction of the requirements of this Order. EPA shall require such additional activities as may be necessary to complete the Work or EPA may, based upon present knowledge and Respondent's certification to EPA, issue written notification to Respondent that the Remedial Action and all other Work under this Order have been completed, as appropriate ("Certificate of Completion"). EPA's notification shall not limit EPA's right to perform periodic reviews pursuant to Section 121(c) of CERCLA, 42 U.S.C. § 9621(c), or to take or require any action that in the judgment of EPA is appropriate at the Site, in accordance with 42 U.S.C. §§ 9604, 9606, or 9607.

X. FAILURE TO ATTAIN PERFORMANCE STANDARDS

57. In the event that EPA determines that additional response activities are necessary to meet applicable Performance Standards, EPA may notify Respondent that additional response actions are necessary.

58. Unless otherwise stated by EPA, within thirty (30) days of receipt of notice from EPA that additional response activities are necessary to meet any applicable Performance Standards, Respondent shall submit for approval by EPA a work plan for the additional response activities. The plan shall conform to the applicable requirements of sections IX, XVI, and XVII of this Order. Upon EPA's approval of the plan pursuant to Section XIV, Respondent shall implement the plan for additional response activities in accordance with the provisions and schedule contained therein.

XI. EPA PERIODIC REVIEW

59. Under section 121(c) of CERCLA, 42 U.S.C. 9621(c), and any applicable regulations, EPA may review the Site to assure that the Work performed pursuant to this Order adequately protects human health and the environment. Until such time as EPA certifies

completion of the Work, Respondent shall conduct the requisite studies, investigations, or other response actions as determined necessary by EPA in order to permit EPA to conduct the review under section 121(c) of CERCLA. As a result of any review performed under this paragraph, Respondent may be required to perform additional work or to modify work previously performed.

XII. ADDITIONAL RESPONSE ACTIONS

60. EPA may determine that in addition to the work identified in this Order and attachments to this Order, additional response activities may be necessary to protect human health and the environment. If EPA determines that additional response activities are necessary, EPA may require Respondent to submit a work plan for additional response activities. EPA may also require Respondent to modify any plan, design, or other deliverable required by this Order, including any approved modifications.

61. Not later than thirty (30) days after receiving EPA's notice that additional response activities are required pursuant to this Section, Respondent shall submit a work plan for the response activities to EPA for review and approval. Upon approval by EPA, the work plan is incorporated into this Order as a requirement of this Order and shall be an enforceable part of this Order. Upon approval of the work plan by EPA, Respondent shall implement the work plan according to the standards, specifications, and schedule in the approved work plan. Respondent shall notify EPA of their intent to perform such additional response activities within seven (7) days after receipt of EPA's request for additional response activities.

XIII. ENDANGERMENT AND EMERGENCY RESPONSE

62. In the event of any action or occurrence during the performance of the work which causes or threatens to cause a release of a hazardous substance or which may present an immediate threat to public health or welfare or the environment, Respondent shall immediately take all appropriate action to prevent, abate, or minimize the threat, and shall immediately notify EPA's Remedial Project Manager (RPM) or, if the RPM is unavailable, EPA's alternate contact. If neither of these EPA employees is available, the Respondents shall notify the EPA Emergency Response Section, Region IX by calling (800) 300-2193. Respondent shall take such action in consultation with EPA's RPM and in accordance with all applicable provisions of this Order, including but not limited to the Health and Safety Plan and the Contingency Plan. In the event that Respondent fails to take appropriate response action as required by this Section, and EPA takes that action instead, Respondent shall reimburse EPA for all costs of the response action not inconsistent with the NCP. Respondent shall pay the response costs in the manner described in Section XXIV of this Order, within thirty (30) days of Respondent's receipt of demand for payment.

63. Nothing in the preceding paragraph shall be deemed to limit any authority of the United States to take, direct, or order all appropriate action to protect human health and the environment or to prevent, abate, or minimize an actual or threatened release of

hazardous substance on, at, or from the Site.

XIV. EPA REVIEW OF SUBMISSIONS

64. After review of any deliverable, plan, report or other item which is required to be submitted for review and approval pursuant to this Order, EPA may: (a) approve the submission; (b) approve the submission with modifications; (c) disapprove the submission and direct Respondent to re-submit the document after incorporating EPA's comments; or (d) disapprove the submission and assume responsibility for performing all of any part of the response action. As used in this Order, the terms "approval by EPA," "EPA approval," or a similar term means the action described in (a) or (b) of this paragraph.

65. In the event of approval or approval with modifications by EPA, Respondent shall proceed to take any action required by the plan, report, or other item, as approved or modified by EPA.

66. Upon receipt of a notice of disapproval or a request for a modification, Respondent shall, within twenty-one (21) days or such longer time as specified by EPA in its notice of disapproval or request for modification, correct the deficiencies and resubmit the plan, report, or other item for approval. Notwithstanding the notice of disapproval, or approval with modifications, Respondent shall proceed, at the direction of EPA, to take any action required by any non-deficient portion of the submission.

67. If any submission is not approved by EPA, Respondent shall be deemed to be in violation of this Order.

XV. PROGRESS REPORTS

68. In addition to the other deliverables set forth in this Order, Respondent shall provide annual progress reports to EPA with respect to actions and activities undertaken pursuant to this Order. The progress reports shall be submitted on or before the 30th day of June for the year in which the sample was taken, beginning with 2011. Respondent's obligation to submit progress reports continues until EPA gives Respondent written notice under 56. At a minimum these progress reports shall include all requirements established in section IV.B of the SOW.

XVI. QUALITY ASSURANCE, SAMPLING AND DATA ANALYSIS

69. Respondent shall use the quality assurance, quality control, and chain of custody procedures described in the "EPA Requirements for Quality Assurance Project Plans (QA/R-5)" (EPA/240/B-01/003, March 2001) and "Guidance for Quality Assurance Project Plans (QA/G-5)" (EPA/240/R-02/009, December 2002), and any amendments to these documents, while conducting all sample collection and analysis activities required herein by any plan. To provide quality assurance and maintain quality control, Respondent shall:

a. Use only laboratories which have a documented quality system that complies with ANSI/ASQC E4-1994, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs," (American National Standard, January 5, 1995) and "EPA Requirements for Quality Management Plans (QA/R-2)" (EPA/240/B-01/002, March 2001) or equivalent documentation as determined by EPA. EPA may consider laboratories accredited under the National Environmental Laboratory Accreditation Program (NELAP) to meet the quality system requirements.

b. Ensure that the laboratory used by the Respondent for analyses, performs according to a method or methods deemed satisfactory to EPA and submits all protocols to be used for analyses to EPA at least fourteen (14) days before beginning analysis.

c. Ensure that EPA personnel and EPA's authorized representatives are allowed access to the laboratory and personnel utilized by the Respondent for analyses.

70. Respondent shall notify EPA not less than fourteen (14) days in advance of any sample collection activity. At the request of EPA, Respondent shall allow split or duplicate samples to be taken by EPA or its authorized representatives, of any samples collected by Respondent with regard to the Site or pursuant to the implementation of this Order. In addition, EPA shall have the right to take any additional samples that EPA deems necessary.

XVII. COMPLIANCE WITH APPLICABLE LAWS

71. All activities by Respondent pursuant to this Order shall be performed in accordance with the requirements of all Federal and State laws and regulations. EPA has determined that the activities contemplated by this Order are consistent with the NCP.

72. Except as provided in section 121(e) of CERCLA and the NCP, no permit shall be required for any portion of the Work conducted entirely on-Site. Where any portion of the Work requires a Federal or State permit or approval, Respondent shall submit timely applications and take all other actions necessary to obtain and to comply with all such permits or approvals.

73. This Order is not, and shall not be construed to be, a permit issued pursuant to any Federal or State statute or regulation.

XVIII. REMEDIAL PROJECT MANAGER

74. All communications, whether written or oral, from Respondent to EPA shall be directed to EPA's Remedial Project Manager or alternate contact. Respondent shall submit to EPA one hardcopy and one electronic version of all documents, including plans, reports,

and other correspondence, which are developed pursuant to this Order, and shall send these documents by certified mail:

EPA's Remedial Project Manager is:
Rachelle Thompson
U.S. EPA (SFD-7-3)
75 Hawthorne Street
San Francisco, CA 94105-3972
(415) 972-3962
thompson.rachelle@epa.gov

EPA's alternate contact is:
Lynn Suer
U.S. EPA (SFD-7-2)
75 Hawthorne Street
San Francisco, CA 94105-3972
(415) 972-3148
suer.lynn@epa.gov

75. EPA has the unreviewable right to change its Remedial Project Manager or alternate contact. If EPA changes its Remedial Project Manager or alternate contact, EPA will inform Respondent in writing of the name, address, and telephone number of the new Remedial Project Manager or alternate contact.

76. EPA's RPM and alternate contact shall have the authority lawfully vested in a Remedial Project Manager and On-Scene Coordinator by the National Contingency Plan, 40 C.F.R. Part 300. EPA's RPM or alternate contact shall have authority, consistent with the National Contingency Plan, to halt any work required by this Order, and to take any necessary response action.

XIX. ACCESS TO SITE NOT OWNED BY RESPONDENT

77. EPA is aware that Respondent currently has a site access agreement to perform work on the Site from the Site's current owner, Siren Data SC-3, LLC.

78. If the current owner transfers ownership of the Site or Respondent's current site access agreement does not permit Respondent to conduct all Work required under this Order and/or does not meet all the requirements of a site access agreement specified in Paragraph 79, Respondent will obtain, or use its best efforts to obtain, site access agreements from the present owner within 60 days of becoming aware that either occurrence has happened. Additionally, if an off-Site area that is to be used for access, property where documents required to be prepared or maintained by this Order are located, or other property subject to or affected by the clean up, is owned in whole or in part by parties other than those bound by this Order, Respondent will obtain, or use its best efforts to obtain, site access agreements from the present owner within 60 days of the

effective date of this Order.

79. Such agreements shall provide access for EPA, its contractors and oversight officials, the State and its contractors, and Respondent or Respondent's authorized representatives and contractors, and such agreements shall specify that Respondent is not EPA's representative with respect to liability associated with Site activities. Respondent shall save and hold harmless the United States and its officials, agents, employees, contractors, subcontractors, or representatives for or from any and all claims or causes of action or other costs incurred by the United States including but not limited to attorneys fees and other expenses of litigation and settlement arising from or on account of acts or omissions of Respondent, its officers, directors, employees, agents, contractors, subcontractors, and any persons acting on their behalf or under their control, in carrying out activities pursuant to this Order, including any claims arising from any designation of Respondent as EPA's authorized representative under Section 104(e) of CERCLA.

80. Respondent's best efforts shall include providing reasonable compensation to any off-Site property owner. If access agreements are not obtained within the time referenced above in Paragraph 79, Respondent shall immediately notify EPA of its failure to obtain access. Subject to the United States' non-reviewable discretion, EPA may use its legal authorities to obtain access for the Respondent, may perform those response actions with EPA contractors at the property in question, or may terminate the Order if Respondent cannot obtain access agreements. If EPA performs those tasks or activities with contractors and does not terminate the Order, Respondent shall perform all other activities not requiring access to that property, and shall reimburse EPA, pursuant to Section XXIV of this Order, for all costs incurred in performing such activities. Respondent shall integrate the results of any such tasks undertaken by EPA into its reports and deliverables. Respondent shall reimburse EPA, pursuant to Section XXIV of this Order, for all response costs (including attorney fees) incurred by the United States to obtain access for Respondent.

XX. SITE ACCESS TO DATA/DOCUMENT AVAILABILITY

81. Respondent may assert a claim of business confidentiality covering part or all of the information submitted to EPA pursuant to the terms of this Order under 40 C.F.R. § 2.203, provided such claim is not inconsistent with section 104(e)(7) of CERCLA, 42 U.S.C. § 9604(e)(7) or other provisions of law. This claim shall be asserted in the manner described by 40 C.F.R. § 2.203(b) and substantiated by Respondent at the time the claim is made. Information determined to be confidential by EPA will be given to protection specified in 40 C.F.R. Part 2. If no such claim accompanies the information when it is submitted to EPA, it may be made available to the public by EPA or the state without further notice to the Respondent. Respondent shall not assert confidentiality claims with respect to any data related to Site conditions, sampling, or monitoring.

82. Respondent shall maintain for the period during which this Order is in effect, an index of documents that Respondent claims contain confidential business information. The index shall contain, for each document, the date, author, addressee, and subject of the

document. Upon written request from EPA, Respondent shall submit a copy of the index to EPA.

XXI. RECORD PRESERVATION

83. Respondent shall provide to EPA upon request, copies of all documents and information within their possession and/or control or that of their contractors or agents relating to activities at the Site or to the implementation of this Order, including but not limited to sampling, analysis, chain of custody records, manifests, trucking logs, receipts, reports, sample traffic routing, correspondence, or other documents or information related to the Work. Respondent shall also make available to EPA for purposes of investigation, information gathering, or testimony, their employees, agents, or representatives with knowledge of relevant facts concerning the performance of the Work.

84. Until ten (10) years after EPA provides notice pursuant to Paragraph 56, Respondent shall preserve and retain all records and documents in its possession or control, including the documents in the possession or control of their contractors and agents on and after the effective date of this Order that relate in any manner to the Site. At the conclusion of this document retention period, Respondent shall notify the United States at least ninety (90) calendar days prior to the destruction of any such records or documents, and upon request by the United States, Respondent shall deliver any such records or documents to EPA.

85. Until ten (10) years after EPA provides notice pursuant to Paragraph 56 of this Order, Respondent shall preserve, and shall instruct their contractors and agents to preserve, all documents, records, and information of whatever kind, nature or description relating to the performance of the Work. Upon the conclusion of this document retention period, Respondent shall notify the United States at least ninety (90) days prior to the destruction of any such records, documents or information, and, upon request of the United States, Respondent shall deliver all such documents, records, and information to EPA.

86. Within thirty (30) days after the effective date of this Order, Respondent shall submit a written certification to EPA's RPM that they have not altered, mutilated, discarded, destroyed or otherwise disposed of any records, documents or other information relating to their potential liability with regard to the Site since notification of potential liability by the United States or the State or the filing of suit against it regarding the Site. Respondent shall not dispose of any such documents without prior approval by EPA. Respondent shall, upon EPA's request and at no cost to EPA, deliver the documents or copies of the documents to EPA.

XXII. DELAY IN PERFORMANCE

87. Any delay in performance of this Order that, in EPA's judgment, is not properly justified by Respondent under the terms of this paragraph shall be considered a violation of this Order. Any delay in performance of this Order shall not affect Respondent's obligations to fully perform all obligations under the terms and conditions of this Order.

88. Respondent shall notify EPA of any delay or anticipated delay in performing any requirement of this Order. Such notification shall be made by telephone to EPA's RPM or alternate contact within forty-eight (48) hours after Respondent first knew or should have known that a delay might occur. Respondent shall adopt all reasonable measures to avoid or minimize any such delay. Within five (5) business days after notifying EPA by telephone, Respondent shall provide written notification fully describing the nature of the delay any justification for delay, any reason why Respondent should not be held strictly accountable for failing to comply with any relevant requirements of this Order, the measures planned and taken to minimize the delay, and a schedule for implementing the measures that will be taken to mitigate the effect of the delay. Increased costs or expenses associated with implementation of the activities called for in this Order are not a justification for any delay in performance.

XXIII. ASSURANCE OF ABILITY TO COMPLETE WORK

89. Within thirty (30) days of the Effective Date of this Order, the Respondents shall provide EPA with documentation that reasonably demonstrates their financial ability to complete the work to be performed pursuant to this Order. Examples of adequate financial documentation that EPA may accept include, but are not limited to, a signed contract with or guarantee on the part of the Respondents' contractor indicating that it will complete the work to be performed (including payment terms, such as whether the contract is pre-paid); an irrevocable letter of credit payable to EPA from a financial institution; a policy of insurance that provides EPA with acceptable rights as a beneficiary thereof; an escrow account for the value of the work to be performed; or a demonstration by the Respondents that they have adequate net worth and/or cash flow to pay for the work to be performed (which may include financial statements, auditors' reports, and the like).

90. Respondent shall not release, cancel, or discontinue any performance guarantee provided pursuant to this Section except as provided in this Paragraph. If Respondent receives written notice from EPA in accordance with paragraph 56 that the Work has been fully and finally completed in accordance with the terms of this Order, or if EPA otherwise so notifies Respondent in writing, Respondent may thereafter release, cancel, or discontinue the performance guarantee(s) provided pursuant to this Section.

91. At least seven (7) days prior to commencing any work at the Site pursuant to this Order, Respondent shall submit to EPA a certification that Respondent or its contractors and subcontractors have adequate insurance coverage or have indemnification for liabilities for injuries or damages to persons or property which may result from the activities to be conducted by or on behalf of Respondent pursuant to this Order. Respondent shall ensure that such insurance or indemnification is maintained for the duration of the Work required by this Order.

XXIV. REIMBURSEMENT OF RESPONSE COSTS

92. Reimbursement of response costs related to this Order and work done thereunder will continue to be controlled by Administrative Consent Order 93-8, entered into by

Respondent and EPA in February 1993. This Order does not affect Administrative Consent Order 93-8. Administrative Consent Order 93-8 is included as Appendix C to this Order, which is incorporated by reference into this Order and is an enforceable part of this Order.

XXV. UNITED STATES NOT LIABLE

93. The United States, by issuance of this Order, assumes no liability for any injuries or damages to persons or property resulting from acts or omissions by Respondent, or its directors, officers, employees, agents, representatives, successors, assigns, contractors, or consultants in carrying out any action or activity pursuant to this Order. Neither EPA nor the United States may be deemed to be a party to any contract entered into by Respondent or its directors, officers, employees, agents, successors, assigns, contractors, or consultants in carrying out any action or activity pursuant to this Order.

XXVI. ENFORCEMENT AND RESERVATIONS

94. EPA reserves the right to bring an action against Respondent under section 107 of CERCLA, 42 U.S.C. § 9607, for recovery of any response costs incurred by the United States related to this Order and not reimbursed by Respondent. This reservation shall include but not be limited to past costs, direct costs, indirect costs, the costs of oversight, the costs of compiling the cost documentation to support oversight cost demand, as well as accrued interest as provided in section 107(a) of CERCLA.

95. Notwithstanding any other provision of this Order, at any time during the response action, EPA may perform its own studies, complete the response action (or any portion of the response action) as provided in CERCLA and the NCP, and seek reimbursement from Respondent for its costs, or seek any other appropriate relief.

96. Nothing in this Order shall preclude EPA from taking any additional enforcement actions, including modification of this Order or issuance of additional Orders, and/or additional remedial or removal actions as EPA may deem necessary, or from requiring Respondent in the future to perform additional activities pursuant to CERCLA, 42 U.S.C. § 9606(a), *et seq.*, or any other applicable law. Respondent shall be liable under CERCLA § 107(a), 42 U.S.C. § 9607(a), for the costs of any such additional actions.

97. Notwithstanding any provision of this Order, the United States hereby retains all of its information gathering, inspection and enforcement authorities and rights under CERCLA, RCRA and any other applicable statutes or regulations.

98. Respondent shall be subject to civil penalties under section 106(b) of CERCLA, 42 U.S.C. § 9606(b), of not more than $37,500 for each day in which Respondent willfully violates, or fails or refuses to comply with this Order without sufficient cause. In addition, failure to properly provide response action under this Order, or any portion hereof, without sufficient cause, may result in liability under section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3), for punitive damages in an amount at least equal to,

and not more than three times the amount of any costs incurred by the Fund as a result of such failure to take proper action.

99. Nothing in this Order shall constitute or be construed as a release from any claim, cause of action or demand in law or equity against any person for any liability it may have arising out of or relating in any way to the Site.

100. If a court issues an order that invalidates any provision of this Order or finds that Respondent has sufficient cause not to comply with one or more provisions of this Order, Respondent shall remain bound to comply with all provisions of this Order not invalidated by the court's order.

XXVII. ADMINISTRATIVE RECORD

101. Upon request by EPA, Respondent must submit to EPA all documents related to the selection of the response action for possible inclusion in the administrative record file.

XXVIII. EFFECTIVE DATE AND COMPUTATION OF TIME

102. This Order shall be effective thirty (30) days after the Order is signed by the Superfund Assistant Director. All times for performance of ordered activities shall be calculated from this effective date.

XXIX. OPPORTUNITY TO CONFER

103. Respondent may, within ten (10) days after the date this Order is signed, request a conference with EPA's designated representative to discuss this Order. If requested, the conference shall occur within 10 days of the request for conference and will be held at 75 Hawthorne St, San Francisco, CA.

104. The purpose and scope of the conference shall be limited to issues involving the implementation of the response actions required by this Order and the extent to which Respondent intends to comply with this Order. This conference is not an evidentiary hearing, and does not constitute a proceeding to challenge this Order. It does not give Respondent a right to seek review of this Order, or to seek resolution of potential liability, and no official stenographic record of the conference will be made. At any conference held pursuant to Respondent's request, Respondent may appear in person or by an attorney or other representative.

105. Requests for a conference must be by telephone followed by written confirmation mailed that day to:

Erica Maharg
Assistant Regional Counsel
75 Hawthorne St.
San Francisco, CA 94131
(415) 972-3943

So ordered, this 4th day of May, 2011.

By: _____
Kathleen Salyer, Assistant Director
Superfund Division
California Site Cleanup Branch
U.S. Environmental Protection Agency, Region IX

APPENDIX A

Appendix A to the Unilateral Administrative Order

Statement of Work
Remedial Action

Intel Corp. Santa Clara 3 Superfund Site

Table of Contents

I. Introduction

This Statement of Work (SOW) describes the activities that the Respondent must perform in order to maintain, monitor, and evaluate the Remedial Action at the Intel Santa Clara 3 Superfund Site in Santa Clara, California. This SOW is based on the 1990 Intel Corp Record of Decision, as modified in the September 7, 2010 Record of Decision Amendment (ROD Amendment). This SOW is Appendix A to the Intel Santa Clara 3 Unilateral Administrative Order (UAO).

The Intel Santa Clara 3 Site (Site) is located at 2880 Northwestern Parkway, Santa Clara, California (Figure 1). The Site is approximately one acre in size, and consists of a low-rise building, and landscaping and parking areas. The groundwater beneath the Site is contaminated with volatile organic compounds (VOCs), including trichloroethylene (TCE) which is a solvent.

The buildings at the Site were constructed in 1975 by Intel Corporation and were used from 1976 to 2008 for performing quality control of chemicals and electrical testing of semiconductors. The building at the site was unoccupied from 2008 until mid-2010, when the property was purchased by Siren Data Corp. Intel Corporation has been conducting and financing all response activities.

Groundwater extraction and treatment began in 1985, and EPA added the site to the National Priorities List (NPL) in 1986. The Remedial Investigation/Feasibility Study (RI/FS) was completed in 1990. The Remedial Action Plan as set forth in Regional Water Quality Control Board Order No. 90-105, the Final Site Cleanup Requirements, was adopted on July 18, 1990. EPA signed the original Record of Decision for the site on September 20, 1990. The Water Board acted as the lead agency for oversight of the implementation of the remedy until 2006. The selected remedy for the Site was pumping the contaminated groundwater and treating it with activated carbon to remove contaminants before discharging to a storm drain. The remedy also included installation of an additional extraction well, a plan for intermittent pumping to improve the efficiency of the remedy, groundwater monitoring, and the recording of a land use covenant prohibiting the use of shallow groundwater.

The third extraction well was added in 1990. In 1991, the cyclic pumping trial specified by the ROD was begun because the efficiency of the system at removing contamination was declining. Though VOC concentrations continued to decline, no significant increase in overall contaminant removal was obtained by changing the pumping scheme (Figure 2). In 1994 the groundwater extraction and treatment system had been operating for about nine years, and had treated approximately 45 million gallons of groundwater, removing about 28 pounds of TCE. Because the system had removed most of the contaminant mass and was no longer removing significant levels of contaminants, the Water Board approved the cessation of groundwater extraction and allowed Intel to implement a trial monitored natural attenuation program. EPA assumed oversight of the Intel Santa Clara 3 Site in 2006.

On September 7, 2010, the United Stated Environmental Protection Agency (EPA) issued the *Record of Decision Amendment, Intel Santa Clara 3 Superfund Site* (ROD Amendment). The ROD Amendment formally selected Monitored Natural Attenuation (MNA) as the remedy to address the remaining groundwater contamination at the site, by formally modifying the original ROD issued by EPA in 1990. The ROD Amendment presents EPA's basis for selecting the remedial action, and specifies the standards, requirements, performance standards, and other

specifications that shall be attained during the implementation of the remedial action selected by the ROD Amendment. No remedial design is required because a network of groundwater monitoring wells is already in place at the site (Figure 1).

II. Summary of the Intel Santa Clara 3 Remedial Action

The Remedial Action Objectives (RAOs) in the 1990 ROD were to prevent migration of contaminants in the groundwater, prevent any future exposure to the public of contaminated groundwater, and to restore the A-zone groundwater to drinking water quality. These are also the objectives of the revised remedy, although the only outstanding RAO is the restoration of A-zone groundwater to drinking water quality. Annual groundwater monitoring has indicated that the contaminated groundwater is not moving offsite, and the deed restriction at the site is effectively preventing exposure to the contaminated groundwater. Therefore, the remedial action required is to continue monitoring the groundwater under a program sufficient to determine whether MNA is occurring and whether or not the RAOs have been achieved.

III. Performance Criteria

As specified in the UAO, the Respondent shall meet all Performance Criteria and Applicable or Relevant and Appropriate Requirements (ARARs). The ROD, as modified by the ROD Amendment, requires that the groundwater in the A-zone be restored to drinking water quality, with contaminant concentrations below their respective MCLs. Table 1 lists the cleanup standards for the contaminants of concern as specified in the ROD Amendment. The only remaining contaminant of concern above its Maximum Contaminant Level (MCL) is trichloroethene (TCE).

TABLE 1: Groundwater Cleanup Standards

Chemical	Cleanup Standard (ug/L)
1,1-dichloroethane (1,1-DCA)	5
1,2-dichloroethane (1,2-DCA)	0.5
cis-1,2-dichloroethene (cis-1,2-DCE)	6
trans-1,2-dichloroethene (trans-1,2-DCE)	10
1,1dichloroethene (1,1-DCE)	6
Freon 113	1200
Freon 11	150
1,1,1-trichloroethane (1,1,1-TCA)	200
trichloroethene (TCE)	5

The groundwater monitoring program envisioned as part of this Remedial Action should specify the location, frequency, and type of samples and measurements necessary to evaluate whether the remedy is performing as expected and is capable of attaining remediation objectives. In addition, all monitoring programs should be designed to accomplish the following:

- Demonstrate that natural attenuation is occurring according to expectations;

• Detect changes in environmental conditions (*e.g.*, hydrogeologic, geochemical, microbiological, or other changes) that may reduce the efficacy of any of the natural attenuation processes;
• Identify any potentially toxic and/or mobile transformation products;
• Verify that the plume(s) is not expanding (either downgradient, laterally or vertically);
• Verify no unacceptable impact to downgradient receptors;
• Detect new releases of contaminants to the environment that could impact the effectiveness of the natural attenuation remedy;
• Demonstrate the efficacy of institutional controls that were put in place to protect potential receptors; and
• Verify attainment of remediation objectives.

The Groundwater Monitoring Plan should also include a framework for revising the location, frequency, and/or type of samples and measurements as necessary to respond to changes in conditions at the Site.

IV. List of Deliverables and other Tasks

A. Remedial Action Work Plan (Groundwater Monitoring Plan)

Within thirty (30) days of the effective date of the Order, The Respondent shall submit to EPA for approval a draft of a Groundwater Monitoring Plan to perform groundwater monitoring and carry out any other field activities needed to implement the Remedial Action. The Groundwater Monitoring Plan shall be developed in accordance with the Site ROD and EPA-approved Site documents, and relevant guidance. If EPA requests revisions of the Groundwater Monitoring Plan, a revised report will be due twenty-one (21) days after receipt of EPA comments. The Groundwater Monitoring Plan, which may reference and/or update an existing plan, shall include:

- Sampling and Analysis Plan (SAP)
- Health and Safety Plan
- Contingency Plan

1. The SAP shall include a Field Sampling and Analysis Plan (FSAP), a Quality Assurance Project Plan, and a schedule for investigation, sampling, analysis, and reporting activities. The FSP and QAPP may be submitted as one document or separately, and may reference or update existing documents.

   The FSAP shall describe sampling objectives, analytical parameters, sample locations and frequencies, sampling equipment and procedures, sample handling and analysis, management of investigation-derived wastes, and planned uses of the data. The FSAP shall be consistent with "EPA Requirements for Quality Assurance Project Plans (QA/R-5) "(EPA/240/B-01/003, March 2001), and "Guidance for Quality Assurance Project Plans (QA/G-5)" (EPA/240/R-02/009, December 2002), and other applicable guidance. It shall be written so that a field

sampling team unfamiliar with the project would be able to gather the samples and field information required. The FSAP shall include a schedule that describes activities that must be completed in advance of sampling, including acquisition of property, access agreements, and arrangements for disposal of investigation-derived waste.

The QAPP shall describe project objectives, organizational and functional activities, data quality objectives (DQOs), and quality assurance and quality control (QA/QC) protocols that shall be used to achieve the desired DQOs. The QAPP shall be consistent with "EPA Requirements for Quality Assurance Project Plans (EPA QA/R-5)", (EPA/240/B-01/003, March 2001), and "Guidance on Systematic Planning Using the Data Quality Objectives Process (EPA QA/G-4)" (EPA/240/B-06/001, March 2003) and other applicable guidance. The DQOs shall, at a minimum, reflect use of analytical methods for obtaining data of sufficient quality to meet National Contingency Plan requirements as identified at 40 CFR 300.435(b) and 300.430(b)(8). In addition, the QAPP shall address personnel qualifications, laboratory qualification, sampling procedures, sample custody, analytical procedures, document control procedures, preservation of records, data reduction, data validation, data management, procedures that will be used to enter, store, correct, manipulate, and analyze data; protocols for transferring data to EPA in electronic format; and document management.

2. Health and Safety Plan. Respondent shall submit for EPA review a plan (or an update of an existing plan) that ensures the protection of the public health and safety during performance of Work under this Order. This plan shall be prepared in accordance with EPA's *Standard Operating Safety Guide* (PUB 9285.1-03, PB 92-963414, June 1992). In addition, the Health and Safety Plan shall comply with all currently applicable Occupational Safety and Health Administration ("OSHA") regulations found at 29 C.F.R. Part 1910. EPA will review but will not comment on or approve or disapprove the Health and Safety Plan.

3. Contingency Plan. Respondent shall submit for EPA review a plan (or an update of an existing plan) that includes a framework for modification of the monitoring program, including increases or decreases in monitoring parameters, frequency, or locations, to reflect changing conditions or improved understanding of the natural attenuation processes at the site.

B. Annual Reports

Technical Reports summarizing the status of compliance with the prohibitions, specifications, and provisions of this order shall be submitted on an annual basis, or at a different frequency determined by EPA, commencing with a report in 2011, due no later than June 30, 2011 or as arranged with EPA.

The annual reports shall include:

- a summary of work completed since the previous report, and work projected to be completed by the time of the next report

- appropriately scaled and labeled maps showing the location of all monitoring wells and existing structures
- cross sections depicting subsurface geologic information and corresponding correlations showing actual boring lithology data, if new information has changed interpretations since the previous report
- updated water table and piezometric surface maps for all affected water bearing zones, and isoconcentration maps for key pollutants in all affected water bearing zones
- well construction data for any new wells installed since the previous report
- a tabulation of groundwater levels and chemical analysis results for site monitoring wells specified in the sampling plan, including a cumulative tabulation of chemical analysis results for wells with detections of contaminants of concern within the past five years
- identification of potential problems which will cause or threaten to cause noncompliance with this order and what actions are being taken to planned to prevent these obstacles from resulting in noncompliance with this order, and
- in the event of noncompliance with the provisions and specifications of this order, the report shall include written justification for noncompliance and proposed actions to achieve compliance

All hydrogeological plans, specifications, reports and documents shall be signed or stamped with the seal of a registered geologist, engineering geologist, or professional engineer.

C. Five Year Status Report and Effectiveness Evaluation

Approximately once every five years, when requested by EPA, the Respondent shall submit a technical report acceptable to EPA containing the results of any additional investigation; an evaluation of the effectiveness of the remedy; additional recommended measures to achieve final cleanup objectives and standards, if necessary; a comparison of previously expected costs with the costs incurred and projected costs necessary to achieve cleanup objectives and standards; and the tasks and time schedule necessary to implement any additional final cleanup measures.

V. Schedule for Major Deliverables and other Tasks

Activity	Due Date
Remedial Action Work Plan (Groundwater Monitoring Plan)	30 days after the effective date of this Order If requested by EPA, revised plan due twenty-one (21) days after receipt of EPA comments.
Annual Reports	No later than June 30 of each year, beginning in 2011, or as directed by EPA
Five Year Status Report and Effectiveness Evaluation	Approximately once every five years, when requested by EPA

VI. References

The following list, although not comprehensive, provides citations for many of the regulations and guidance documents that apply to the Remedial Action process. The Respondent shall review these guidance documents and shall use the information provided therein in performing the Remedial Action and preparing all deliverables under this SOW.

"Closeout Procedures for National Priority List Sites", U.S. EPA, OSWER Directive No. 9320.2-09AP, January 2000.

"EPA Requirements for Quality Assurance Project Plans (EPA QA/R-5)". EPA/240/B-01/003, March 2001.

"Guidance for Quality Assurance Project Plans (QA/G-5)" EPA/240/R-02/009, December 2002.

"Guidance on Systematic Planning Using the Data Quality Objectives Process (EPA QA/G-4)" EPA/240/B-06/001, March 2003.

"Guidance on Remedial Actions for Contaminated Ground Water at Superfund Sites," U.S. EPA, Office of Emergency and Remedial Response, OSWER Directive No. 9283.1-2.

"Interim Final Guidance on Oversight of Remedial Designs and Remedial Actions Performed by Potentially Responsible Parties," U.S. EPA, Office of Emergency and Remedial Response, February 14, 1990, OSWER Directive No. 9355.5-01.

"National Oil and Hazardous Substances Pollution Contingency Plan, Final Rule," 40 C.F.R. Part 300

"Performance Monitoring of MNA Remedies for VOCs in Ground Water" April 2004. National Risk Management Research Laboratory (NRMRL), Ada, Oklahoma, Publication EPA/600/R-04/027, 92p.

"Superfund Remedial Design/ Remedial Action Handbook," U.S. EPA, Office of Emergency and Remedial Response, June 1995 (EPA 540/R-95/059)

"Use of Monitored Natural Attenuation at Superfund, RCRA Corrective Action, and Underground Storage Tank Sites," April 1999. Final OSWER Directive, Publication EPA/540/R-99/009. NTIS Order Number PB99 963 315, 41p.

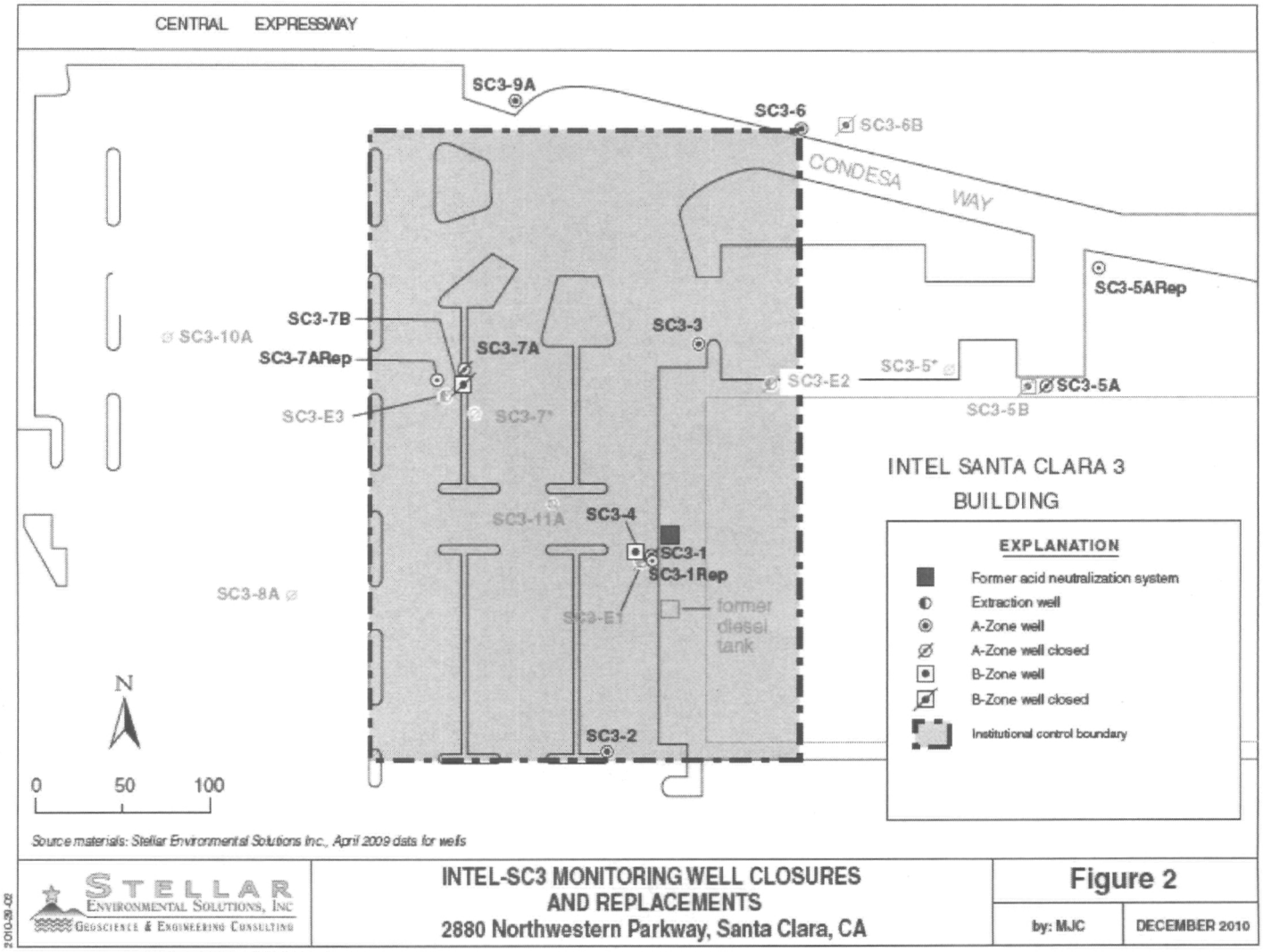

FIGURE 1: MAP OF THE SITE SHOWING MONITORING WELL LOCATIONS

APPENDIX B

RECORD OF DECISION AMENDMENT

INTEL SANTA CLARA 3
SUPERFUND SITE

U.S. Environmental Protection Agency
Region 9
San Francisco, CA

EPA ID: CAT000612184

September 2010

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PART 1: DECLARATION FOR THE RECORD OF DECISION AMENDMENT

A. Site Name and Location

Intel Corp., Santa Clara III (Intel Santa Clara 3)
3880 Northwestern Parkway
Santa Clara, California
CERCLIS Identification No. CAT000612184

B. Statement of Basis and Purpose

This decision document presents the revised remedy for the Intel Santa Clara 3 Site, in Santa Clara, California, which was chosen in accordance with the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) as amended, and, to the extent practicable, the National Contingency Plan (NCP). This decision, which amends the 1990 Record of Decision, is based on the Administrative Record file for this site. The State of California concurs with the selected remedy.

C. Assessment of Site

The response action selected in the 1990 Record of Decision, as modified by this ROD Amendment, is necessary to protect the public health or welfare or the environment from actual or threatened releases of hazardous substances into the environment. The remedy selected in 1990 successfully removed most of the contaminant mass at the site, but is no longer in operation and contamination remains above cleanup standards, and so an amendment to the ROD is necessary.

D. Description of the Revised Remedy

The main components of the original 1990 remedy included:

- Groundwater pumping from extraction wells
- Treatment of the contaminated water with granular activated carbon and discharge of the treated water to surface water pursuant to an NPDES permit
- A pulsed pumping trial to evaluate the efficacy of intermittent pumping to remove residual contamination
- Groundwater monitoring
- A deed restriction to prevent exposure to the contaminated groundwater until cleanup levels are achieved.

This ROD Amendment includes the following components of the original remedy:

- The deed restriction already recorded for the site
- The groundwater monitoring program currently in place at the site.

The revised remedy replaces the other components of the original remedy (pumping, treating, discharging, and intermittent pumping) with:

- Monitored Natural Attenuation (MNA)

E. Statutory Determinations

The revised remedy is protective of human health and the environment, complies with Federal and State requirements that are applicable or relevant and appropriate to the remedial action, is cost-effective, and utilizes permanent solutions and alternative treatment (or resource recovery) technologies to the maximum extent practicable. The revised remedy does not satisfy the statutory preference for treatment as a principal element of the remedy, because most of the contaminant mass was already removed and treated by the original remedy, and no principal threat wastes are present at the site.

Because this remedy will result in hazardous substances, pollutants, or contaminants remaining on-site above levels that allow for unlimited use and unrestricted exposure, the statutory review cycle triggered by the original remedial action will continue to ensure that the remedy is protective of human health and the environment. The next Five Year Review for the site is required in 2011.

F. ROD Data Certification Checklist

The following information is included in the Decision Summary section of this Record of Decision. Additional information can be found in the Administrative Record file for this site.

- Chemicals of concern and their respective concentrations (p. 7)
- Baseline risk represented by the chemicals of concern (p. 7)
- Cleanup levels established for chemicals of concern and the basis for these levels (p. 9)
- How source materials constituting principal threats are addressed (p. 14)
- Current and reasonably anticipated future land use assumptions and current and potential future beneficial uses of ground water used in the baseline risk assessment and ROD (p.7)
- Potential land and ground-water use that will be available at the site as a result of the Selected Remedy (p. 15)
- Estimated capital, annual operation and maintenance (O&M), and total present worth costs, discount rate, and the number of years over which the remedy cost estimates are projected (p. 25)
- Key factor(s) that led to selecting the remedy (i.e., describe how the Selected Remedy provides the best balance of tradeoffs with respect to the balancing and modifying criteria, highlighting criteria key to the decision) (p. 14)

G. Authorizing Signature

Kathleen Salyer, Assistant Director
Superfund Division
CA Site Cleanup Branch
U.S. Environmental Protection Agency, Region 9

9/7/10
Date

PART 2: DECISION SUMMARY

A. Site Name, Location, and Brief Description

The Intel Santa Clara 3 Site (Site) is located at 2880 Northwestern Parkway, Santa Clara, California (Figure 1). The Site is approximately one acre in size, and consists of a low-rise building, and landscaping and parking areas. The groundwater beneath the Site is contaminated with volatile organic compounds (VOCs), including trichloroethylene (TCE) which is a solvent. The responsible party is financing and performing the remedial action. EPA has been the lead regulatory agency at the site since 2006, and the Regional Water Quality Control Board of the State of California is the support agency. The CERCLIS Identification Number is CAT000612184.

B. Site History and Enforcement Activities

The buildings at the Site were constructed in 1975 by Intel Corporation and were used from 1976 to 2008 for performing quality control of chemicals and electrical testing of semiconductors. Groundwater contamination was first discovered at the Site in 1982, when groundwater samples were collected as part of a leak detection program for underground tanks in the Bay Area initiated by the Water Board. Intel Corporation, the responsible party, has been conducting and financing all response activities under several EPA and Water Board orders.

Groundwater extraction and treatment began in 1985, and EPA added the site to the National Priorities List (NPL) in 1986. The Remedial Investigation/Feasibility Study (RI/FS) was completed in 1990. The Remedial Action Plan as set forth in Regional Water Quality Control Board Order No. 90-105, the Final Site Cleanup Requirements, was adopted on July 18, 1990. EPA signed the original Record of Decision for the site on September 20, 1990. The Regional Water Quality Control Board acted as the lead agency for oversight of the implementation of the remedy until 2006. The selected remedy for the Site was pumping the contaminated groundwater and treating it with activated carbon to remove contaminants before discharging to a storm drain. The remedy also included installation of an additional extraction well, a plan for intermittent pumping to improve the efficiency of the remedy, groundwater monitoring, and the recording of a land use covenant prohibiting the use of shallow groundwater.

The third extraction well was added in 1990. In 1991, the cyclic pumping trial specified by the ROD was begun because the efficiency of the system at removing contamination was declining. Though VOC concentrations continued to decline, no significant increase in overall contaminant removal was obtained by changing the pumping scheme (Figure 2). In 1994 the groundwater extraction and treatment system had been operating for about nine years, and had treated approximately 45 million gallons of groundwater, removing about 28 pounds of TCE. Because the system had removed most of the contaminant mass and was no longer removing significant levels of contaminants, the Regional Water Quality Control Board approved the cessation of groundwater extraction and allowed Intel to implement a trial monitored natural attenuation (MNA) program. EPA assumed oversight of the Intel Santa Clara 3 Site in 2006.

C. Community Participation

The Proposed Plan for the ROD amendment for the Intel Santa Clara 3 site was released on May 5, 2010. An announcement was posted in the *Santa Clara Weekly* on May 5, 2010, and a mailing was sent to about 300 recipients within ½ mile of the site. The public comment period lasted from May 5, 2010 to June 4, 2010, and a public meeting was held on May 19, 2010 at the Santa Clara Public Library, 2635 Homestead Road, Santa Clara California. No comments were received during the public comment period.

D. Scope and Role of Response Action

The response action presented in this amendment to the ROD is a follow-up to the original remedy, which was successful at removing most of the contaminant mass in the groundwater. This ROD amendment addresses the entire site, which consists of contamination of the groundwater aquifer. The response action does not address soils because investigations have not demonstrated that soils contain contaminants at levels of concern. The selected remedy replaces part of the existing remedy, which was a groundwater extraction and treatment system that was turned off in 1994. As discussed later in this decision document, groundwater monitoring data collected over recent years demonstrated decreasing levels of contamination in the groundwater. The new remedy, monitored natural attenuation, addresses the remaining TCE contamination that exceeds the cleanup goals.

E. Site Characteristics

Physical Characteristics

The Site is approximately one acre in size and is located at 2880 Northwestern Parkway in the City of Santa Clara, California (Figure 1). The Site consists of a low-rise building and landscaping and parking areas. The City of Santa Clara has a population of 95,200, and is part of the San Francisco Bay Metropolitan Region which has a population of about six million. The Site is located in a light industrial and commercial area, known as Silicon Valley, which is dominated by the electronics industry. Most buildings in the area are low rise developments containing office space and research and development facilities.

Hydrogeology

Groundwater flows to the northeast towards San Francisco Bay (Figure 3). The Site is located in the Santa Clara Valley, a structural basin filled with marine and alluvial sediments. The geology beneath the Site is a complex heterogeneous sequence of interbedded sands, silts, and clays. Municipal water supply wells tap an extensive deep regional confined aquifer that lies generally greater than 200 to 300 feet below ground surface (bgs). A thick, relatively impermeable aquitard separates this deep confined aquifer from a complex series of discontinuous aquifers and aquitards that can extend up to within a few feet of the ground surface. Two distinct water-bearing zones have been investigated at the Site. The uppermost water-bearing zone, called the A-zone, is found from 10 feet bgs to 25 feet bgs. The next lower water-bearing zone, the B-zone, is found from about 30 to 45 feet bgs. The two zones are separated by a four to ten foot

thick aquitard composed of a clayey layer, though there could be some hydraulic connection between the two zones due to the discontinuous nature of the sediment types. The nearest municipal water supply well downgradient of the Site is the City of Santa Clara Well No. 33 located 1.6 miles north of the Site. The nearest residences are approximately 1800 feet south of the site and 7200 feet north-northeast of the site.

Remedial Investigation

Groundwater contamination was first discovered at the Site in 1982 when groundwater samples were collected at the Site as part of a leak detection program for underground tanks initiated by the Regional Board in the South Bay Area. Following the discovery of groundwater contamination at the Site, the Regional Water Quality Control Board required Intel to perform a soil and groundwater investigation. The remedial investigation included groundwater monitoring in the A-zone and B-zone, soil sampling, and soil vapor sampling. The source of contamination was never positively identified. Three potential sources were proposed and, to the extent practical, evaluated. The potential sources were: 1) leaks from the acid waste neutralization area; 2) spills near the above ground solvent storage facility; and 3) solvent spills associated with cleaning out pipes put in place during construction of the facility. As part of the investigations, an acid waste neutralization sump was removed. Data collected during the evaluation of these potential sources indicated that it was unlikely that a source existed which could contribute to the existing VOC pollution in groundwater. Further details are provided in the RI/FS and the original ROD, which are included in the Administrative Record. In 2006, Intel conducted a Focused Feasibility Study to evaluate remedial alternatives that might accelerate the reduction of the remaining TCE to achieve cleanup standards, and conducted a pilot test of chemical oxidation in 2007.

Extent of Contamination

Groundwater contamination at the site is confined to the A-zone, in an area approximately 300 feet by 150 feet across (Figure 3). The contaminants found in groundwater at the Site during the initial investigation included trichloroethylene (TCE); 1,1,1-trichloroethane (1,1,1- TCA); 1,1-dichloroethylene (1,1.DCE); 1,1-dichloroethane (1,1-DCA); 1,2-dichloroethane (1,2-DCA); cis 1,2-dichloroethylene (cis 1,2-DCE); trans 1,2-dichloroethylene (trans 1,2-DCE); Freon 113; and Freon 11. Currently, only TCE is present above cleanup standards, and most of the other chemicals are not detectable above laboratory reporting limits. Table 1 provides the Contaminants of Concern with their respective maximum historical concentrations and maximum present concentrations. The past several years of groundwater monitoring results for the three wells that still have detectable concentrations of TCE are shown in Figures 5, 6, and 7.

TABLE 1: Contaminants of Concern, with A-zone concentrations		
Chemical	**Maximum Historical Concentration (1982-89)**	**Maximum 2010 concentration**
1,1 DCA	8.2	ND[a]
1,2 DCA	16	ND
1,1 DCE	84	ND
cis-1,2-DCE	<7.9[b]	0.7
trans-1,2-DCE	<7.9[b]	ND
1,1,1-TCA	810	ND
TCE	490	11
Freon 113	1300	2.2
Freon 11	2.8	ND

[a] *<0.5 ug/L*

[b] *reported as total 1,2-DCE*

The soil and soil vapor analyses did not indicate significant contamination of site soils. In 1984, the only VOC detected in soil was TCE, at a maximum concentration of 0.048 milligrams per kilogram (mg/kg). This is well below the EPA Region 9 Regional Screening Levels (RSLs) for direct exposure to TCE in soil of 2.8 mg/kg for residential use and 14 mg/kg for industrial use.

F. Current and Potential Future Site and Resource Use

The land use at the site is currently commercial/light industrial. Intel used the site from 1976 to 2008 for performing quality control of chemicals and electrical testing of semiconductors. The building at the site was unoccupied from 2008 until mid-2010, when the property was purchased by Siren Data Corp. The surrounding land use is also commercial/light industrial, and is dominated by the electronics industry. The land use at the Intel Santa Clara 3 site is expected to remain commercial/light industrial because of the surrounding land use patterns and because the deed restriction recorded for the site prohibits residential use of the property.

The State of California has designated the groundwater beneath the site as a potential drinking water source. The Site overlies the Santa Clara Valley groundwater basin, which provides up to 50% of the municipal drinking water for over 1.4 million residents of the Santa Clara Valley. However, the contamination at the Site has only affected the groundwater in the shallowest water-bearing zone, which is not currently used for drinking. Naturally occurring selenium and total dissolved solids make the shallow water unsuitable for drinking without treatment. Due to these characteristics of the shallow groundwater, and the land use covenant in place at the site that restricts the access or use of the groundwater, the shallow groundwater is not reasonably anticipated to be used as a drinking water source.

G. Summary of Site Risks

A Preliminary Health Assessment for the site was prepared by the Agency for Toxic Substances and Diseases Registry, U.S. Public Health Services, in January 19, 1989. The report stated that the site was not considered to be a current public health concern because of the apparent absence of human exposure to hazardous substances. The Water Board conducted a risk assessment for

hypothetical exposure to the 1989 levels of contamination in groundwater in the A-zone. The carcinogenic risk and hazard index associated with drinking and showering with the contaminated groundwater were calculated at $7x10^{-5}$ and 0.001 respectively. As such, the carcinogenic risk was within EPA's acceptable risk range of one-in-a-million (10^{-6}) to one-in-ten-thousand (10^{-4}) individual lifetime excess cancers that may develop in a population, and the hazard index was less than 1. However, the concentration of TCE exceeded applicable or relevant and appropriate requirements (ARARs), which are discussed in subsequent sections. Because ARARs drove the cleanup at the site, not carcinogenic risk, a new risk assessment was not conducted as part of this ROD amendment.

There are no complete exposure pathways currently threatening human health or the environment at the Site. The reasonably anticipated future land use at the Site is light industrial, based on past activity at the Site and surrounding land use. A land use covenant recorded with the Santa Clara County Recorder's Office in 2008 prohibits residential and certain other land uses at the Site. The land use covenant also prohibits groundwater extraction and use or soil excavation without express permission from the Water Board.

The property is mostly paved, and potential impacts to surface waters are not a concern as there are no natural surface drainage features or surface water bodies at the Site. The nearest surface water body is San Tomas Aquino Creek, located ½ mile west of the site. Contamination at the Site does not pose a risk to critical habitats or endangered species because there are no likely exposure pathways. No parks or surface water are adjacent to the site, and over 90% of the property is covered with blacktop or a building slab. Chemical constituents are only present in the shallow groundwater. Therefore, the RI/FS concluded that there is no probable pathway for exposure to critical habitats or endangered species.

Vapor intrusion, where pollutants volatilize from the groundwater and migrate into the air inside nearby buildings, was evaluated as a possible way for humans to be exposed to the contamination, which is an exposure pathway that was not considered in the original ROD. Indoor air monitoring results from March 2010 did not detect the presence of any VOCs above the EPA Region 9 Regional Screening Levels (RSLs). The one detection of TCE at 1.8 $\mu g/m^3$ was below the RSL of 6.1 $\mu g/m^3$ for industrial indoor air, and the one detection of vinyl chloride at 0.076 $\mu g/m^3$ was below the RSL of 2.8 $\mu g/m^3$. The low concentrations of TCE in the groundwater and soil gas also indicate there is no significant risk from vapor intrusion at the Site.

As summarized here, the risks currently posed by contamination at the Site are low and mostly controlled. However, the pump and treat remedy selected in 1990 is no longer functioning as intended, and the remedy must therefore be amended to accurately reflect conditions at the Site.

H. Remedial Action Objectives

The Remedial Action Objectives in the original ROD are to prevent migration of contaminants in the groundwater, prevent any future exposure to the public of contaminated groundwater, and to restore the A-zone groundwater to drinking water quality. These are also the objectives of this revised remedy, although the only outstanding RAO is the restoration of A-zone groundwater to drinking water quality. Annual groundwater monitoring has indicated that the contaminated

groundwater is not moving offsite, and the deed restriction in place at the site is effectively preventing exposure to the contaminated groundwater.

Table 2 provides the cleanup standards from the ROD for all the chemicals initially detected. At the time, these levels were chosen based on proposed or adopted MCLs.

TABLE 2: Groundwater Cleanup Standards	
Chemical	**Cleanup Standard (ug/L)**
1,1-dichloroethane (1,1-DCA)	5
1,2-dichloroethane (1,2-DCA)	0.5
cis-1,2-dichloroethene (cis-1,2-DCE)	6
trans-1,2-dichloroethene (trans-1,2-DCE)	10
1,1dichloroethene (1,1-DCE)	6
Freon 113	1200
Freon 11	150
1,1,1-trichloroethane (1,1,1-TCA)	200
trichloroethene (TCE)	5

From the many VOCs detected initially, TCE is the only contaminant at the Site that remains at levels above its MCL, which is 5 µg/L.

I. Description of Alternatives

EPA evaluated five alternatives for the revised remedy at the Intel Santa Clara 3 Site:

Alternative 1: No Action
Alternative 2: In-situ Enhanced Bioremediation
Alternative 3: In-situ Thermal Desorption
Alternative 4: In-situ Chemical Oxidation
Alternative 5: Monitored Natural Attenuation

Alternative 1: No Action

EPA is required to consider the no action alternative. Under this alternative, the existing land use covenant would remain in place, no additional treatment would be implemented, and monitoring would cease.

Alternative 2: In-situ Enhanced Bioremediation

In-situ bioremediation relies on microorganisms, either naturally occurring or artificially introduced into the subsurface, to break down the contaminants to inert and less toxic by-products. Enhanced bioremediation includes the injection of organic substrates into the subsurface to promote the biotransformation. Bioremediation can occur aerobically (in the presence of oxygen) or anaerobically (without oxygen), but aerobic bioremediation was screened out because of the difficulty of circulating methane, oxygen, and nutrients through the subsurface given the physical site constraints of buildings and utility lines. In the anaerobic process that

was evaluated as an alternative for the Site, microorganisms utilize the injected compounds to chemically convert VOC's such as TCE to intermediate byproducts, and then eventually to non-toxic ethene. The amount of time required to achieve the MCL with this technology is uncertain, and may be a few years to a few decades. In-situ bioremediation is estimated to cost $120,000 in capital cost, with annual operation and maintenance costs of $15,000 for monitoring. The estimated present value cost of Alternative 2 is about $290,000.

Alternative 3: In-situ thermal desorption

In-situ thermal desorption (ISTD) heats the soil in the treatment zone to volatilize contaminants (turn liquid/dissolved TCE into a gas) so they can be collected with a soil vapor extraction system. Individual heating elements reach temperatures of 1,000-1,500°F, and are generally spaced 10 to 20 feet apart. The well field is designed such that the areas heated by each element overlap to maintain the minimum temperature required to volatilize the TCE throughout the target area. The system would operate for a few months to a year, followed by monitoring to determine effectiveness. Disadvantages of implementing ISTD at the site include interference with and endangerment of subsurface piping, as well as high energy cost. The capital cost for ISTD is estimated at $280,000, with $15,000 of annual monitoring costs for about 10 years. The present value cost of Alternative 3 is about $360,000.

Alternative 4: In-situ chemical oxidation

This alternative uses oxidation, which is a chemical reaction involving electron transfer, to chemically convert contaminants into non-hazardous or less toxic compounds that are more stable, less mobile, or non-reactive. Chemical oxidation breaks TCE down to carbon dioxide and water. In-situ oxidation would require the injection of oxidants (chemicals that induce the reaction), such as Fenton's Reagent, hydrogen peroxide, or permanganate, into the ground so that they can react with and destroy the contaminants in the groundwater. A pilot test of oxidant injection was conducted by Intel in 2006. TCE concentrations initially decreased, but rebounded and did not decrease below the MCL (Figures 5-7). Because multiple injections of oxidant will be required, the exact amount of time required to achieve the MCL with this technology is uncertain, but will be a few years to a few decades. In-situ chemical oxidation is estimated to cost $140,000, with annual operation and maintenance costs of $15,000 in monitoring. The present value cost of Alternative 4 is about $300,000.

Alternative 5: Monitored Natural Attenuation (EPA's Preferred Alternative)

Natural attenuation relies on naturally occurring physical, chemical, or biological processes that act without human intervention to reduce the mass, toxicity, mobility, volume, or concentration of contaminants in soil or groundwater. A study investigating the suitability of natural attenuation for the Site was conducted in 2009. Lines of evidence show that TCE concentrations are decreasing through physical, not biological, processes. Based on the most recent five years of monitoring data, the two remaining wells with TCE concentrations above the MCL are projected to take 5 to 35 years to reach the MCL. Depending upon the model and data set used, estimates range from a few years to several decades, so an exact prediction of the time required to reach the MCL in all wells is not possible. There is no capital cost associated with MNA

because the monitoring wells have already been constructed, but the monitoring costs of about $20,000 a year add up to a present value cost of about $230,000.

Common Elements and Distinguishing Features

Each of the five remedy alternatives addresses the remaining groundwater contamination at the site. All alternatives include the existing deed restriction recorded for the site, which prevents exposure to the contaminated groundwater. All alternatives except for Alternative 1, No Action, include groundwater monitoring. The key distinguishing feature of the alternatives is the treatment technology employed to reduce the remaining TCE concentration below the MCL. Alternative 1 takes no further action to address the TCE in the groundwater. Alternatives 2, 3, and 4 use active in-situ technologies, which are bioremediation, thermal desorption, and chemical oxidation, respectively. Alternative 5 relies on passive reduction of TCE concentrations through naturally occurring processes. Other distinguishing features related to nine criteria that EPA uses to evaluate remedial alternatives are discussed in the Comparative Analysis section.

Expected Outcomes of Each Alternative

The expected outcome of Alternatives 2, 3, 4, and 5 is the reduction of TCE concentrations in the shallow groundwater below the MCL. Alternative 1, because it does not include further monitoring, would not be expected to demonstrate that a reduction of TCE below the MCL has been achieved. The timeframe to achieve the remedial objectives varies depending upon the alternative, and there is considerable uncertainty in the estimates of the time to achieve the MCL.

J. Comparative Analysis of Alternatives

EPA evaluates each of the alternatives based on nine standard criteria. The two threshold criteria are the most important: overall protection of human health and the environment, and compliance with federal and state "applicable or relevant and appropriate requirements" (ARARs). Balancing criteria include long-term effectiveness and permanence; reductions in toxicity, mobility, and volume through treatment; short-term effectiveness; implementability and cost. Modifying criteria are state and community acceptance, which will be evaluated after the close of the public comment period. Figure 8 illustrates how each alternative compares to the nine criteria.

Threshold Criteria

Overall protection of human health and the environment

All of the alternatives will be protective of human health and the environment. The plume is not migrating, and there are no exposure pathways that might harm environmental receptors. Alternatives 2-5 will reduce TCE concentrations in the groundwater to below the MCL, which is considered protective of human health. The land use covenant already in place that restricts soil excavation and groundwater use currently prevents exposure to the TCE contamination in the groundwater.

Compliance with ARARs

ARARs can be chemical specific, action specific, or location specific. The MCL for TCE of 5 µg/L is a relevant and appropriate chemical-specific requirement. Alternative 1 does not comply with ARARs because it would leave concentrations of TCE at the Site above the MCL. Because Alternative 1 does not meet this threshold criterion, it was not analyzed further. Alternatives 2-5 will reduce the TCE concentrations below the MCL, and will thus comply with ARARs.

Balancing Criteria

Long-term effectiveness and permanence

The remediation achieved by Alternatives 2-5 would be permanent. Successful implementation of any of these alternatives would clean up the groundwater to drinking water standards, and continued monitoring would ensure that the reduction in concentrations is not temporary. The land use covenant already recorded for the Site restricts soil disturbance and groundwater use at the Site, which further assures permanent long-term protectiveness. In terms of long-term effectiveness, however, Alternative 4 would likely require multiple iterations of oxidant injection to achieve MCLs, since the contaminant is tightly bound to the soil. It is uncertain whether even multiple injections would reduce concentrations below MCL's, so natural attenuation might be required, in addition to in-situ chemical oxidation to achieve remedial action objectives. Therefore, the long-term effectiveness of this technology alone is uncertain. Similarly, the long-term effectiveness of Alternative 2 is uncertain because the lack of naturally occurring biological degradation indicates that conditions may be unsuitable for bioremediation. Furthermore, the pathway from TCE to harmless byproducts sometimes stalls at intermediate byproducts, and so once the TCE concentration is reduced, other contaminants could then require additional remediation. Alternatives 3 and 5 are expected to be effective in the long-term without the use of additional technologies.

Reduction in toxicity, mobility, or volume through treatment

Alternative 2 generates intermediate byproducts that are more toxic than TCE, such as vinyl chloride, but the end products of complete bioremediation will be nontoxic, so Alternative 2 reduces toxicity through treatment. Alternative 3 would remove TCE from the groundwater and then treat the collected TCE vapors at the surface, satisfying the preference for treatment. Similarly, Alternative 4 would satisfy the preference for treatment by destroying TCE using chemical oxidation and converting it into benign byproducts, such as carbon dioxide and water. Alternative 5 is not an active treatment for the purposes of this criterion, and thus ranks lower than other alternatives, but most of the contaminant mass was already removed and treated as part of the original remedy for the Site.

Short-term effectiveness

One aspect of short-term effectiveness is protection of community and workers during implementation of the remedy. Alternatives 2, 3, and 4 all pose some risk to the workers implementing the remedy, due to the presence of high temperatures, heavy machinery, and/or strong chemicals. However, by following health and safety protocols these risks can be managed. Alternative 5, monitored natural attenuation, poses the least risk to workers or the community during implementation. Another aspect of short-term effectiveness is the amount of time required to achieve the remediation goals. Alternative 3 would take the least time relative

to the other technologies. The time required to achieve remediation goals is more uncertain for Alternatives 2, 4, and 5, and so this aspect of the short-term effectiveness criterion is not a strong distinguishing factor between these alternatives.

Implementability

Alternative 3 has low technical feasibility due to interference with subsurface gas and electric utility lines at the Site. Additionally, the high temperatures generated by the technology are incompatible with the PVC monitoring wells onsite, which would have to be replaced. Therefore, Alternative 3 has very low implementability. Alternative 2 has moderate implementability, due to the difficulty of sustaining biological reactions with low levels of contaminants, and because biological degradation does not appear to be naturally occurring at the Site. There are also challenges associated with evenly distributing the compounds designed to enhance bioremediation throughout the subsurface, due to the clay properties of the soil and obstructions from utility lines and buildings. Alternative 4 has similar challenges related to getting the injected chemicals in contact with the contaminants to create the oxidation reaction. Alternative 5 is the most implementable at the site, since additional subsurface structures are not needed.

Cost

EPA compares each alternative based on upfront capital cost, annual operation and maintenance cost, and overall present value cost, which is a measure of the total future project cost over a 30 year timeframe. Alternatives 2, 3 and 4 have significant upfront costs because of the onsite work required. Alternative 3 has the highest capital cost of $280,000, followed by Alternative 4 at $140,000, and Alternative 2 at $120,000. Alternative 5 has no upfront capital cost. Operation and maintenance costs for all the alternatives are similar, because the main annual expense is monitoring. Alternative 5 has a slightly higher operation and maintenance cost than the other alternatives, because monitoring for natural attenuation requires additional analyses beyond just TCE concentrations. In terms of present value costs, the most expensive technology is Alternative 3, estimated to cost $360,000. The next most expensive alternatives have very similar present value costs, of $300,000 for Alternative 4 and $290,000 for Alternative 2. Given the uncertainty in the number of injections and the amount of monitoring that will be required, these two costs are comparable. Alternative 5 is the least expensive, with an estimated present value cost of $230,000.

Modifying Criteria

State Acceptance

Staff of the Regional Water Quality Control Board, San Francisco Region, concur with EPA's proposed plan.

Community Acceptance

Community members did not provide comments on the proposed plan at the public meeting or submit written comments during the public comment period. Since there were no objections

raised regarding the proposed amendment to the remedy, EPA assumes that amending the remedy is acceptable to the community.

K. Principal Threat Waste

The NCP establishes an expectation that EPA will use treatment to address the principal threats posed by a site wherever practicable. The principal threat concept is applied to the characterization of source materials at a Superfund site. Contaminated groundwater generally is not considered to be a source material, thus no principal threat waste exists at the Intel Santa Clara 3 site.

L. Selected Remedy

Based on information currently available, the EPA believes the selected remedy meets the threshold criteria and provides the best balance of tradeoffs among the other alternatives with respect to the balancing and modifying criteria. The EPA expects the selected remedy to satisfy the following statutory requirements of CERCLA §121(b): (1) be protective of human health and the environment; (2) comply with ARARs (or justify a waiver); (3) be cost-effective; (4) utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable; and (5) satisfy the preference for treatment as a principal element, or explain why the preference for treatment will not be met.

EPA's preferred alternative is Alternative 5, Monitored Natural Attenuation, which will protect human health and the environment and achieve ARAR's. Though significant biological degradation does not appear to be occurring, other physical and chemical processes have been reducing contaminant concentrations since the pump and treat system was turned off. At Intel Santa Clara 3, the level of TCE in one of the three monitoring wells that still has detections of TCE is already below the MCL, and the remaining two wells with detectable TCE concentrations are gradually approaching the MCL of 5 µg/L. Though it may take several years or decades to reach the MCL, the alternative is still effective in the short term because there are no complete exposure pathways at the Site, the plume is not migrating, and the land use covenant currently in place prevents the groundwater from being accessed or used for any purpose. Even though Alternative 5 does not satisfy the preference for treatment, the original remedy already removed and treated most of the contaminant mass at the Site, and there are no principal threat wastes at the Site. Due to the low residual contaminant concentrations, the more active in-situ technologies would have significantly higher capital costs with limited value in risk reduction.

Monitored natural attenuation will rely on naturally occurring physical, chemical, or biological processes that act without human intervention to reduce the mass, toxicity, mobility, volume, or concentration of contaminants in soil or groundwater. Three wells at the site still have detectable concentrations of TCE, though only two wells have TCE still above the MCL. The concentrations have been declining, though not linearly (Figures 5-7). The most recent monitoring event detected TCE at 11 µg/L in well SC3-7A, 7.1 µg/L in SC3-3, and 3.1 µg/L in SC3-1. Depending upon the model and data set used, estimates for the time to reach the MCL range from a few years to several decades, so an exact prediction of the time required to reach the MCL in all wells is not possible. The land use covenant recorded in 2008 will remain in

place for the site, and the annual groundwater monitoring program will continue. There is no capital cost associated with MNA, but the monitoring costs of about $20,000 a year add up to a present value cost of about $230,000 over a 30 year time horizon.

The expected outcome of the remedy is the restoration of the shallowest groundwater at the site to the quality required by its State-designated beneficial use as a potential source of drinking water. Specifically, TCE concentrations in the A-zone are expected to decrease below the MCLs within a few years or a few decades. The current land use of light industrial will not be affected by this revision of the remedy.

M. Statutory Determinations

Under CERCLA §121 and the NCP, the lead agency must select remedies that are protective of human health and the environment, comply with applicable or relevant and appropriate requirements (unless a statutory waiver is justified), are cost-effective, and utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable. In addition, CERCLA includes a preference for remedies that employ treatment that permanently and significantly reduces the volume, toxicity, or mobility of hazardous wastes as a principal element and a bias against off-site disposal of untreated wastes.

This revision to the remedy is protective of human health and the environment. It is expected to achieve the remedial action objective of returning the contaminated groundwater to drinking water quality. Until this goal is achieved, a land use covenant already recorded for the site will remain in place to ensure that there are no exposure pathways to the contaminated groundwater.

This amendment to the remedy complies with all applicable or relevant and appropriate requirements identified for the site. From the ARARs identified during the original ROD, the only ARAR that still applies are the MCLs. The other requirements were complied with during the construction and/or operation of the original remedy but are no longer applicable or relevant and appropriate. The MCL for TCE is relevant and appropriate because the state of California has designated the groundwater at the site as a potential drinking water aquifer, and the chosen remedy is expected to reduce the concentration of TCE below the MCL and will therefore comply with ARARs.

This revision to the original remedy is cost-effective. The other remedial alternatives, including in-situ bioremediation, in-situ chemical oxidation, and in-situ thermal desorption, are more expensive with limited benefit in risk reduction because there are currently no exposure pathways to the contaminated groundwater. While monitored natural attenuation is more expensive than no action due to the long-term groundwater monitoring component of the remedy, the monitoring program is necessary to comply with ARARs by enabling a future determination that MCLs have been achieved.

The reductions in TCE concentrations achieved by this revision to the remedy are expected to be permanent and the remedy uses alternative or resource recovery technologies. While monitored natural attenuation is not a technology per se, it is an alternative remedy to the energy intensive pump and treat system that was part of the original remedy.

Monitored natural attenuation does not satisfy the preference for treatment as a principal element, but this preference applies to principal threat wastes, and no principal threat wastes are present at the site. Furthermore, the original remedy, which included treatment as a principal element, already removed and treated most of the contaminant mass at the site. Therefore, because this amendment is a follow-up remedy to address residual contamination, choosing a remedy without active treatment is acceptable.

NCP §300.430(f)(4)(ii) requires a five-year review if the remedial action results in hazardous substances, pollutants, or contaminants remaining on-site above levels that allow for unlimited use and unrestricted exposure. TCE concentrations in the groundwater are still above levels that allow for unlimited use and unrestricted exposure, and so the statutory five year review requirement triggered by the original remedial action will remain in place for the site. Three five year reviews (1995, 2001, and 2006) have been completed for the site since the original ROD was signed. The next five year review will be conducted in 2011.

N. Documentation of Significant Changes

No objections to the proposed revision to the remedy were received, and so this remedy selected in this ROD amendment does not differ significantly from the Proposed Plan made available in May 2010.

PART 3: REPONSIVENESS SUMMARY

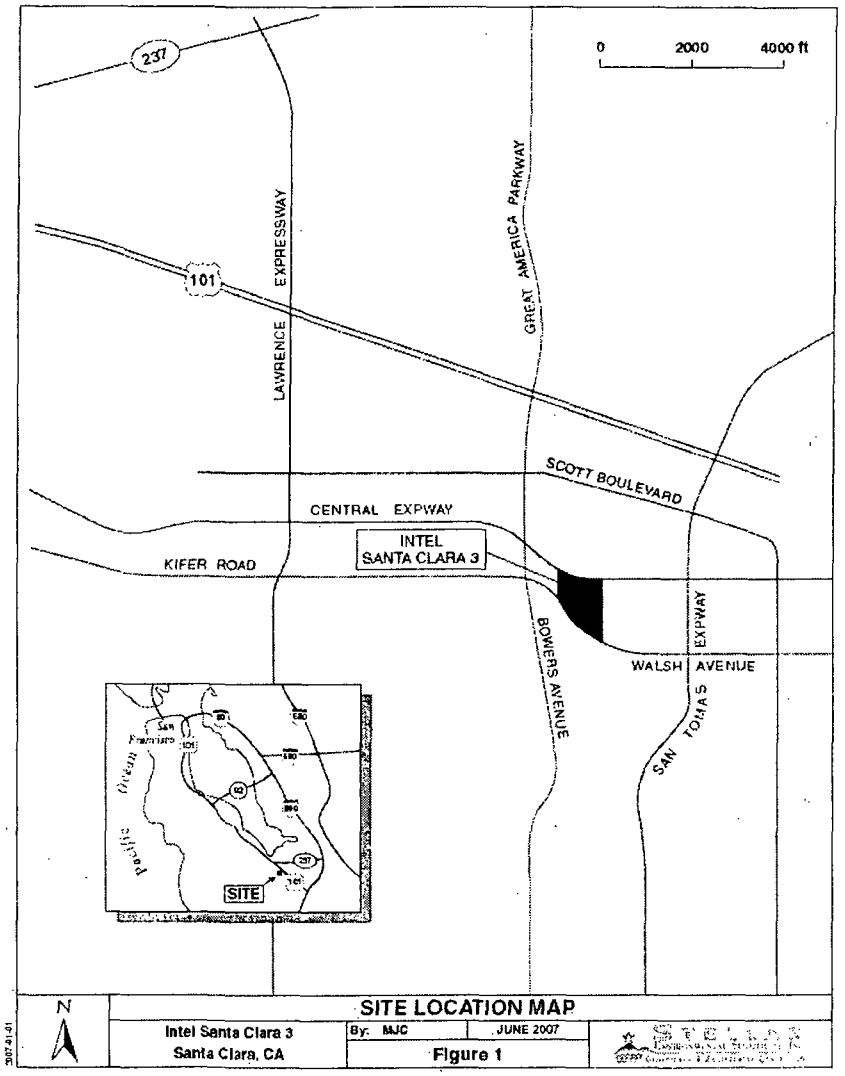
EPA did not receive any substantive comments on the Proposed Plan to amend the ROD during the public comment period, and therefore there is no response to comments included as part of this amendment to the ROD. Intel Corporation, the responsible party, previously submitted a report in 1996 entitled Request for Fundamental Change to Record of Decision: Remediation by Natural Attenuation, and continues to support monitored natural attenuation as an appropriate remedial alternative.

A. Stakeholder Comments and Lead Agency Responses

The California Regional Water Quality Control Board, San Francisco Region, concurs with EPA's selected remedy. There were no objections raised by the Water Board regarding the proposed amendment to the ROD. The concurrence letter is in included in the Administrative Record.

List of Acronyms

1,1 DCA	1,1-dichloroethane
1,1 DCE	1,1-dichloroethene
1,1,1 TCA	1,1,1-trichloroethane
1,2 DCA	1,2-dichloroethane
ARAR	Applicable or Relevant and Appropriate Requirement
bgs	below ground surface
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
cis 1,2 DCE	cis-1,2-dichloroethene
ISCO	In-situ chemical oxidation
ISTD	In-situ thermal desorption
MCL	Maximum Contaminant Level
MNA	Monitored natural attenuation
NCP	National Contingency Plan
NPL	National Priorities List
O&M	Operation and Maintenance
ROD	Record of Decision
RSL	Regional Screening Level
RWQCB	Regional Water Quality Control Board
TCE	trichloroethene
trans 1,2 DCE	trans-1,2-dichloroethene
VOC	volatile organic compound


0 2000 4000 ft
237
101
LAWRENCE EXPRESSWAY
GREAT AMERICA PARKWAY
SCOTT BOULEVARD
CENTRAL EXPWAY
KIFER ROAD
INTEL
SANTA CLARA 3
BOWERS AVENUE
WALSH AVENUE
EXPWAY
SAN TOMAS
SITE
N
SITE LOCATION MAP
Intel Santa Clara 3
Santa Clara, CA
By: MJC
JUNE 2007
Figure 1

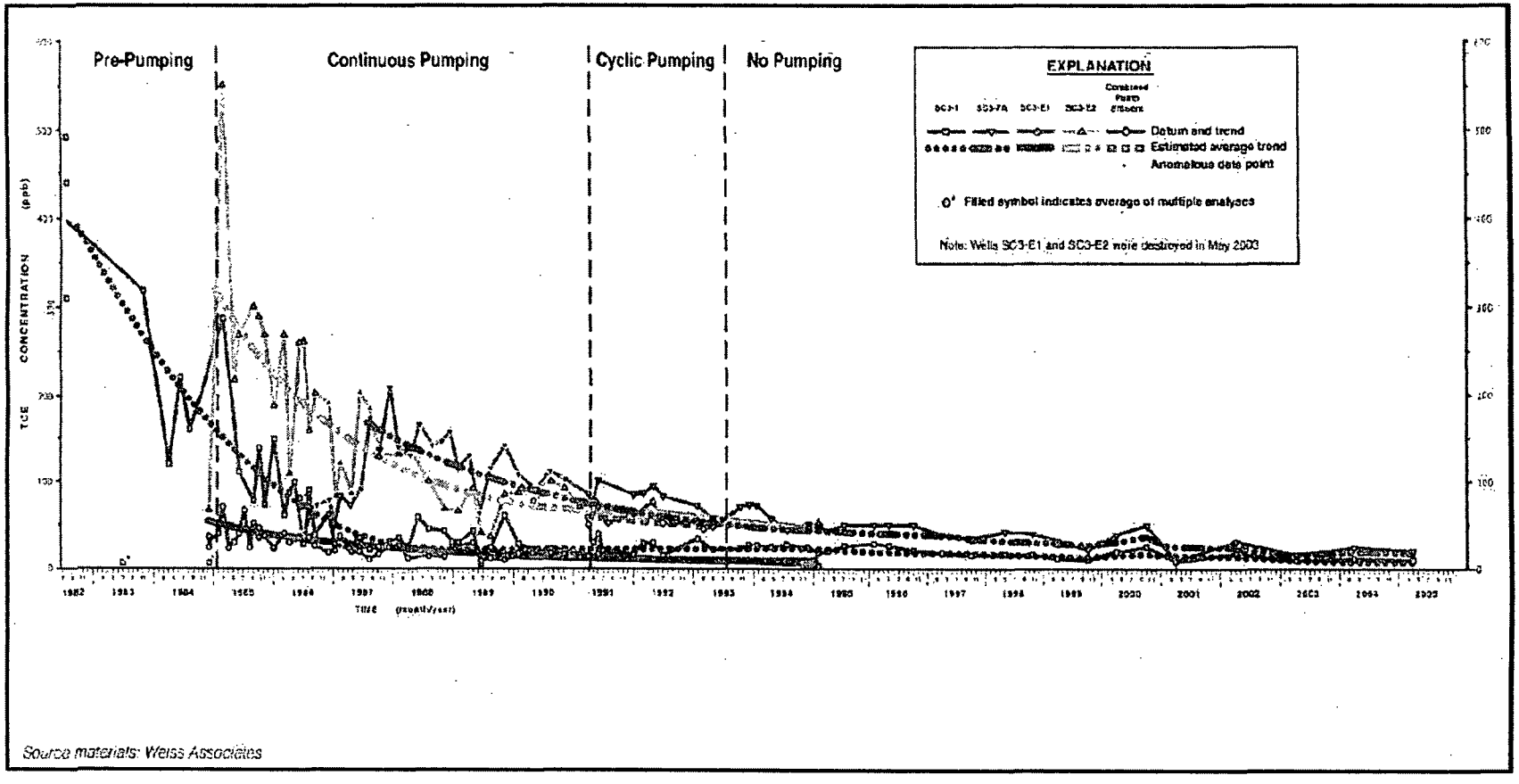
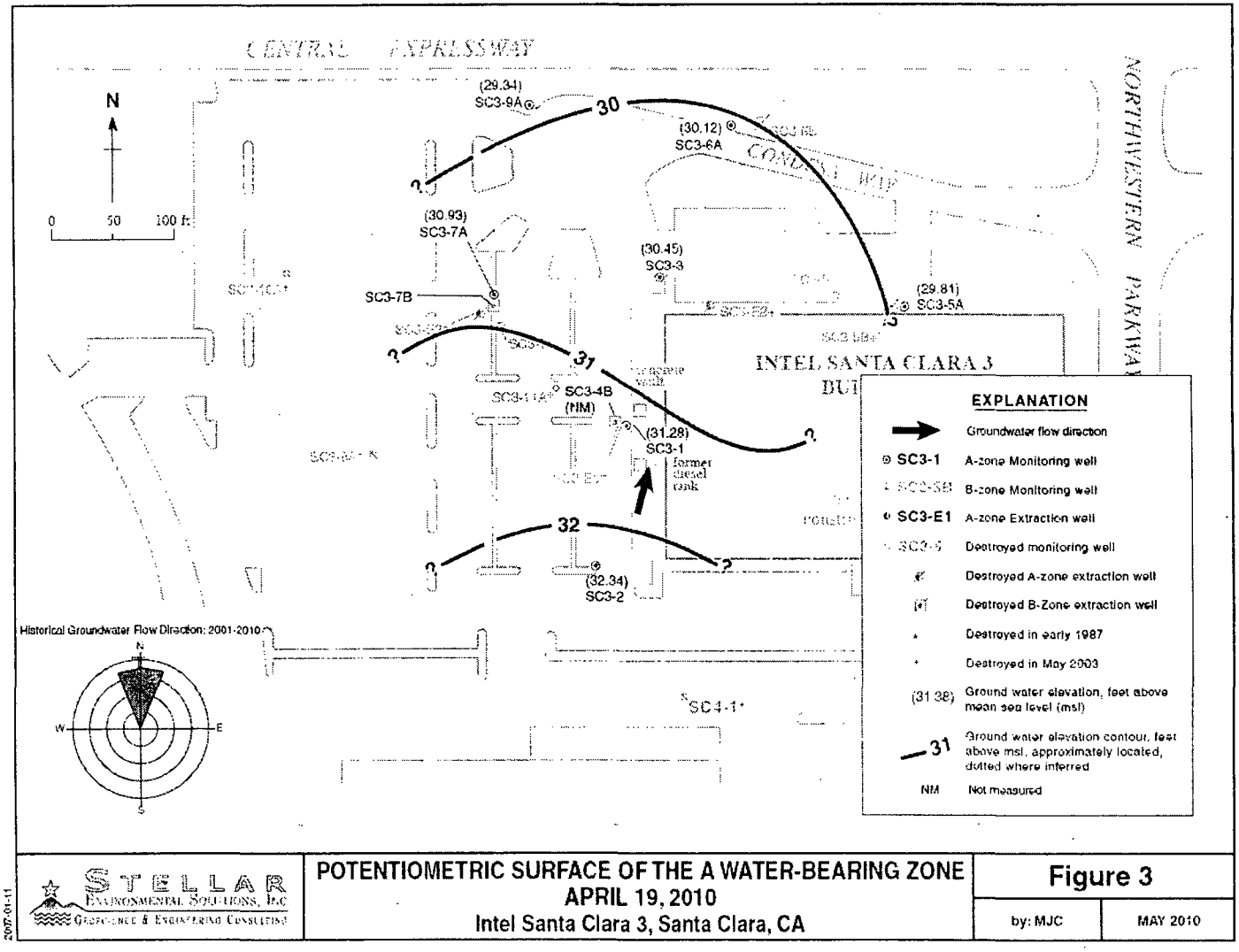


Figure 2: TCE concentrations in groundwater over time



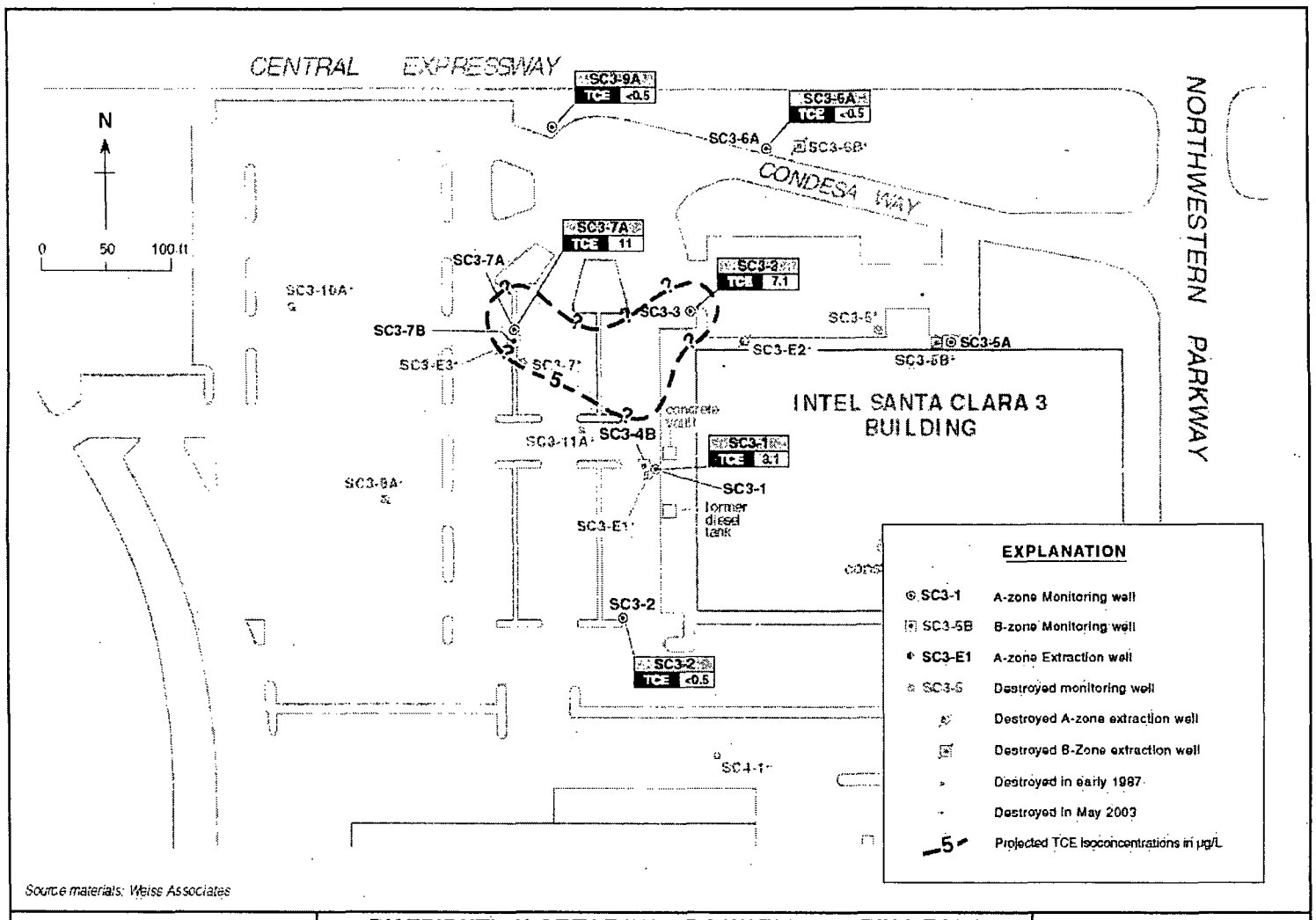
STELLAR ENVIRONMENTAL SOLUTIONS, INC
GEOSCIENCE & ENGINEERING CONSULTING

POTENTIOMETRIC SURFACE OF THE A WATER-BEARING ZONE
APRIL 19, 2010
Intel Santa Clara 3, Santa Clara, CA

Figure 3

by: MJC | MAY 2010

2007-01-11



Source materials: Weiss Associates

STELLAR ENVIRONMENTAL SOLUTIONS, INC
GEOSCIENCE & ENGINEERING CONSULTING

DISTRIBUTION OF TCE IN THE A WATER-BEARING ZONE
APRIL 19, 2010
Intel Santa Clara 3, Santa Clara, CA

Figure 4

by: MJC | MAY 2010

2009-01-08

Figure 5: TCE Concentrations in Intel Well SC3-1
April 2002 - April 2010, Santa Clara, CA

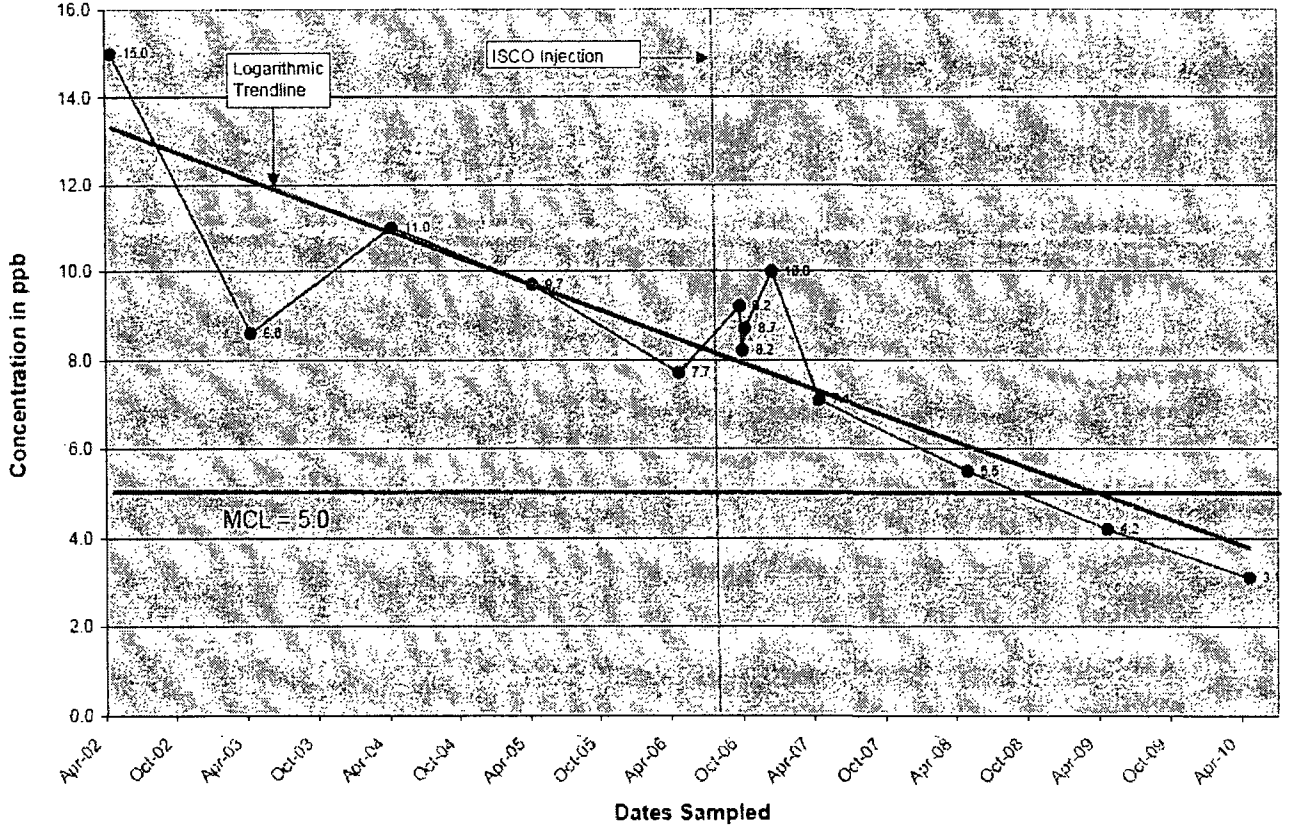


Figure 6: TCE Concentrations in Intel Well SC3-3
April 2002 - April 2010, Santa Clara, CA

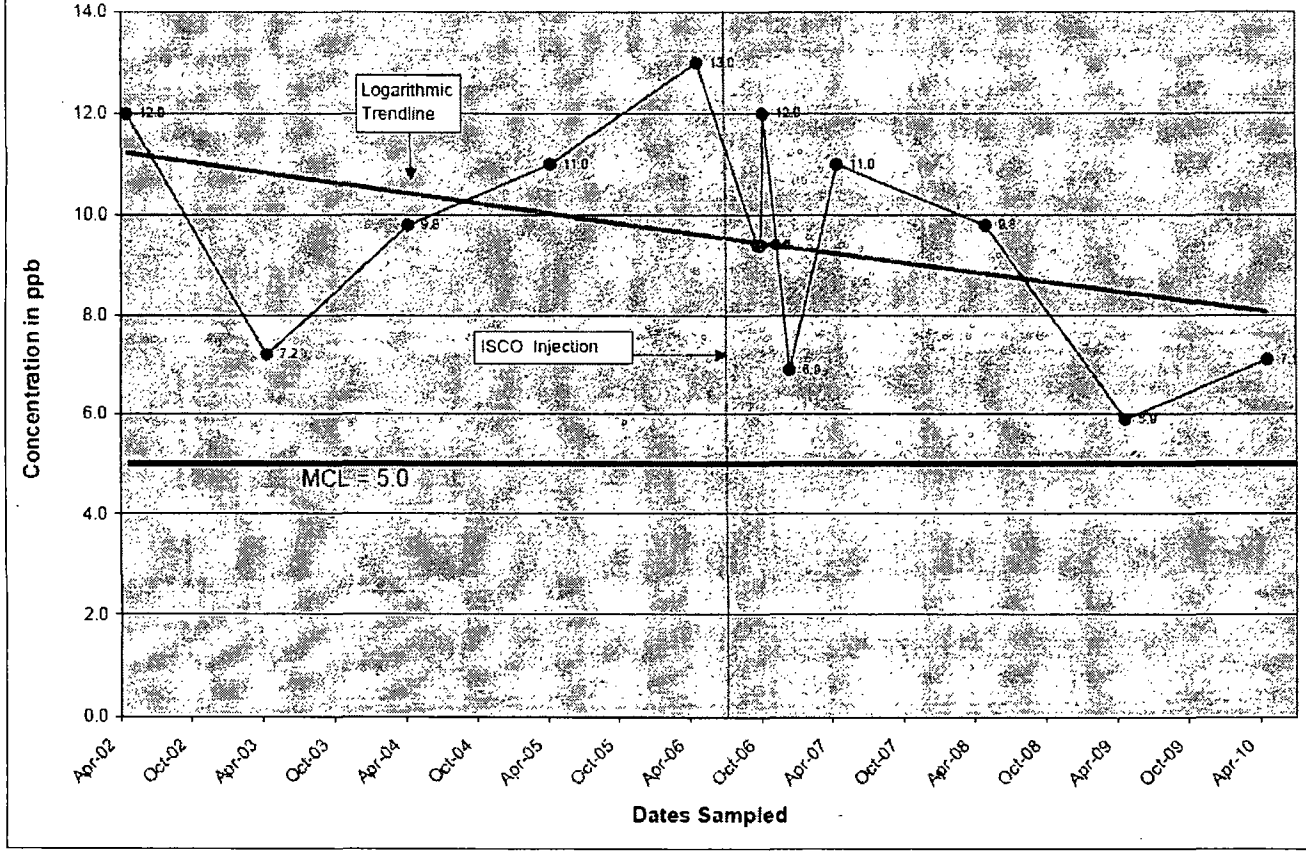


Figure 7: TCE Concentrations in Intel Well SC3-7A
April 2002 - April 2010, Santa Clara, CA

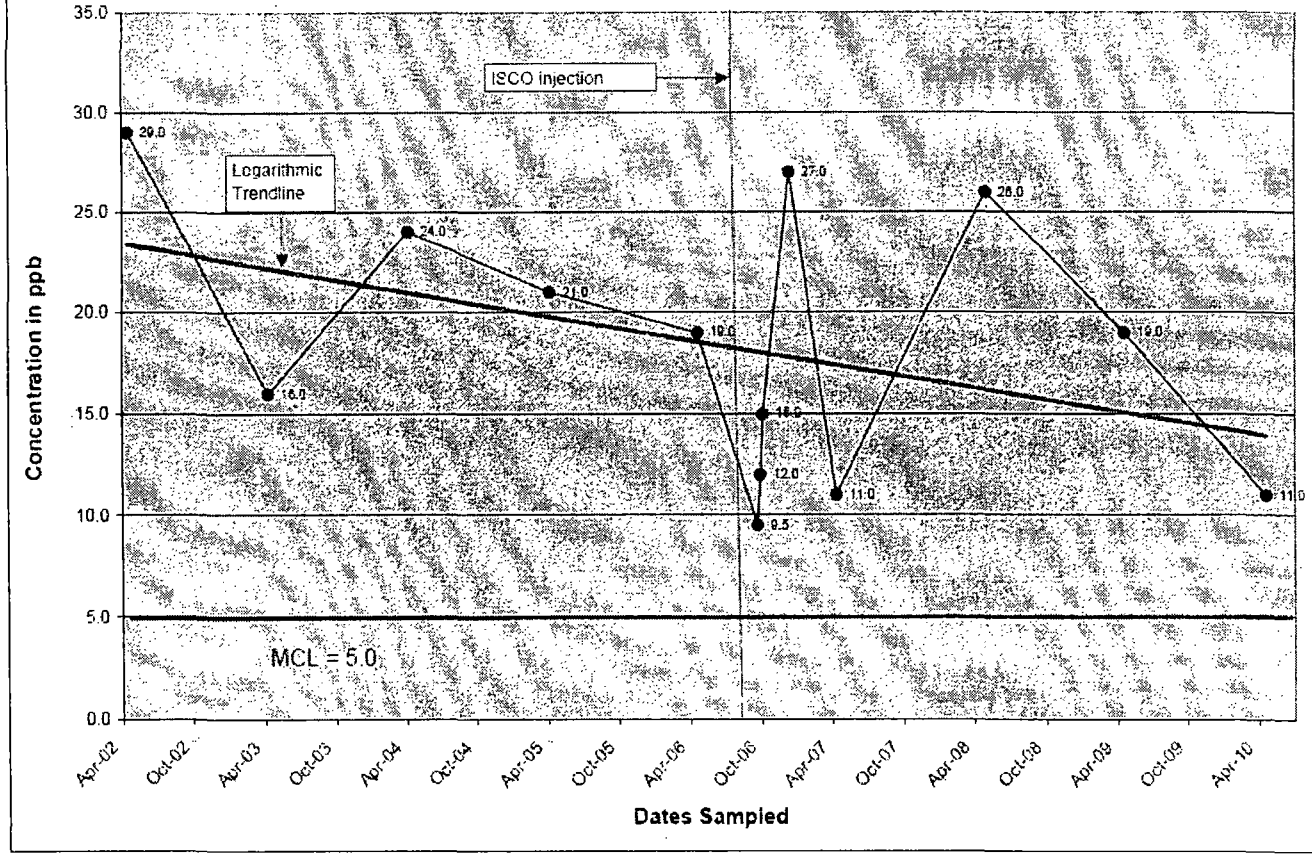


Figure 8: Nine Criteria Analysis (excluding State and Community Acceptance)

Evaluation Criteria	Alternative 1 No Action	Alternative 2 In-situ Bioremediation	Alternative 3 In-situ Thermal Desorption	Alternative 4 In-Situ Chemical Oxidation	Alternative 5 Monitored Natural Attenuation
Overall Protectiveness of Human Health and the Environment	●	●	●	●	●
Compliance with ARARs	○	●	◕	●	●
Long-term Effectiveness and Permanence	—	◒	●	◒	●
Reduction of Toxicity, Mobility, or Volume through Treatment	—	●	●	●	○
Short-term Effectiveness	—	◒	◒	◒	●
Implementability	—	◒	○	◒	●
Capital Cost	—	$120,000	$280,000	$140,000	$0
Annual O&M Cost	—	$15,000	$15,000	$15,000	$20,000
Present Value Cost[1]	—	$290,000	$360,000	$300,000	$230,000

[1]Present Value Cost estimated over 30 years at 7% discount rate

○ = Does not meet criterion ◒ = Partially meets criterion ● = Meets criterion

The information in this cost estimate summary table is based on the best available information regarding the anticipated scope of the remedial alternative. Changes in the cost elements are likely to occur as a result of new information and data collected during the engineering design of the remedial alternative. Major changes may be documented in the form of a memorandum in the Administrative Record file, an ESD, or a ROD amendment. This is an order-of-magnitude engineering cost estimate that is expected to be within +50 to -30 percent of the actual project cost.

APPENDIX C

TLJ copy

Karen Goldberg
Assistant Regional Counsel, RC-3
United States Environmental Protection Agency, Region IX
75 Hawthorne Street
San Francisco, California 94105
(415) 744-1382

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX

In the matter of: Intel Corporation, Respondent. Proceeding Under Section 122(h) (1) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (42 U.S.C. § 9622(h) (1)) as amended by the Superfund Amendments and Reauthorization Act of 1986	ADMINISTRATIVE CONSENT ORDER 93-8

This Order is issued by the United States Environmental Protection Agency ("EPA") and is agreed to by Intel Corporation ("Respondent"). The purpose of this Order is for EPA to recover response costs incurred and response costs to be incurred by the United States at or in connection with the Intel Santa Clara 3 Site ("Site") in Santa Clara County, California and to resolve the liability of the Respondent for such response costs.

EPA is authorized to enter into this Order pursuant to the authority vested in the Administrator of the EPA by Section 122(h) (1) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986, Pub. L. No. 99-499 ("CERCLA"), which authority has been delegated to the Regional Administrators of the EPA by EPA Delegation No. 14-14-D (Sept. 13, 1987), and redelegated to the Director, Hazardous Waste Management Division, EPA Region IX .

WHEREAS, EPA alleges that hazardous substances as defined by Section 101(14) of CERLCA, 42 U.S.C. section 9601(14), are present at the Site and that such hazardous substances have been or are threatened to be released into the environment from the Site;

WHEREAS, EPA alleges that the Site is a "facility" as defined in Section 101(9) of CERCLA, 42 U.S.C. section 9601(9);

WHEREAS, EPA alleges that such releases or threatened releases required response action to be undertaken at the Site pursuant to Section 104 of CERCLA, 42 U.S.C. section 9604, and will require further response action to be undertaken in the future;

WHEREAS, EPA alleges that in performing this response action, it has incurred response costs at or in connection with the Site totalling over $240,000 as of July 31, 1991, and that further response costs will be incurred in the future;

WHEREAS, EPA alleges that the Respondent is a responsible party pursuant to Section 107(a) of CERCLA, 42 U.S.C. section 9607(a), and is liable for response costs incurred and to be incurred at or in connection with the Site;

WHEREAS, the Acting Regional Administrator of EPA Region IX has determined that the total response costs incurred by the United States to date at or in connection with the Site do not exceed $500,000, excluding interest, and that, based upon information currently available to EPA, total United States response costs at or in connection with the Site are not anticipated to exceed $500,000, excluding interest, in the future; and

WHEREAS, EPA and the Respondent desire to settle certain claims arising from the Respondent's alleged involvement with the Site without litigation and without the admission or adjudication of any issue of fact or law;

NOW, THEREFORE, in consideration of the promises herein, and intending to be legally bound hereby, it is ordered and agreed as follows:

1. This order shall be binding upon EPA and shall be binding upon the Respondent and its successors and assigns. Each signatory to this Order represents that he or she is fully authorized to enter into the terms and conditions of this Order and to bind legally the party represented by him or her. The Respondent agrees to undertake all actions required by this Order. The Respondent consents to the issuance of this Order and will not contest EPA's authority to enter into this Order or to implement or enforce its terms.

2. The Respondent agrees to pay to the Hazardous Substance Superfund, within ten days of the effective date of this Order, $247,944.69, which amount includes interest.

3. The Respondent's payment shall be made by certified or cashier's check made payable to "EPA-Hazardous Substance Superfund." The check shall reference the name and address of the Respondent, the site name and identification number (CAT000612184), and the EPA docket number for this action and shall be sent by the Respondent to:

EPA Region IX
ATTN: Superfund Accounting
P.O. Box 360863M
Pittsburgh, PA 15251

4. The Respondent shall simultaneously send a copy of its check to:

James C. Hanson
Mail Code H-6-3
U.S. Environmental Protection Agency, Region IX
75 Hawthorne Street
San Francisco, CA 94105

5. In addition to any other remedies or sanctions available to EPA, if Respondent fails or refuses to comply with any term or condition of this Order, Respondent shall be subject to enforcement action pursuant to Section 122(h) (3) of CERCLA, 42 U.S.C. § 9622(h) (3), and to civil penalties pursuant to Sections 122(1) and 109 of CERCLA, 42 U.S.C. §§ 9622(1) and 9609.

6 Respondent agrees to pay the United States' future response costs incurred at or in connection with the Site, including response costs incurred from and after July 31, 1991, and including interest from the date the cost was incurred at the rate specified by Section 107 of CERCLA. EPA shall provide to Respondent a detailed summary of all expenses annually. Respondent reserves the right to demonstrate, and has the burden of demonstrating, that EPA's cost summary contains accounting errors or that EPA's costs are inconsistent with the National Contingency Plan. No reimbursement of a particular charge shall be required if EPA cannot produce any documentation evidencing that charge. The Respondent shall reimburse EPA for all undisputed response costs within thirty (30) days from receipt of EPA's annual cost summary, in accordance with the procedures set forth in Sections 3 and 4 of this Order. Any disputed costs shall be resolved in accordance with the dispute resolution provision contained in Section 7 of this Order.

7. a. Any disputes concerning the United States' future response costs shall be resolved in the following manner. Within thirty (30) days from receipt of EPA's annual cost summary, Respondent shall notify the EPA program contact listed in Section 4 of its objections to EPA's costs. Respondent's objections shall be made in writing and shall define the dispute, state the basis of Respondent's objections, and be sent certified mail, return receipt requested. All costs not disputed shall be paid pursuant to Section 6 of this Order. EPA and the Respondent shall have thirty (30) days from the date of EPA's receipt of the Respondent's objection to reach agreement on the disputed costs. EPA may extend this period as needed to provide substantiation of its costs. If an agreement is reached, Respondent shall pay the agreed amount within fourteen (14) days after the date of such agreement.

b. If an agreement is not reached within said time period, including extensions, Respondent may request a determination by EPA's Hazardous Waste Management Division Director. Respondent shall pay the costs owed pursuant to EPA's final decision within fourteen (14) days after the date of said decision. The parties recognize that under CERCLA § 107(a), the United States is entitled to recover only those costs which are not inconsistent with the National Contingency Plan. Respondent shall not, by reason of this Order, have any right to judicial review not otherwise provided under law. Respondent's payment shall include interest on the amount due, calculated from the date that the cost was incurred to the date of payment, at the rate established by Section 107 of CERCLA, 42 U.S.C. section 9607.

c. If Respondent fails to make payment when due under this Section, EPA reserves the right to seek statutory penalties and/or any other appropriate relief.

8. Subject to Section 11 of this Order, upon payment of the amount specified in Section 2 of this Order, EPA agrees that the Respondent shall have resolved any and all civil liability to EPA under Section 107(a) of CERCLA, 42 U.S.C. section 9607(a), for reimbursement of EPA response costs incurred at or in connection with the Site as of July 31, 1991. Respondent shall also have resolved any and all civil liability to EPA under Section 107(a) of CERCLA for reimbursement of those future response costs which it has paid under Section 6 above.

9. A cost shall be deemed to have been "incurred" for purposes of this Order as of the date it is paid by EPA, or, if applicable, as of the date it is paid by the agency or entity administering CERCLA funds granted by EPA. If a cost was paid prior to July 31, 1991 but was not yet recorded against the relevant site-specific account number in EPA's accounting system, or, if applicable, in the grantee agency's or entity's accounting system, the cost shall not be considered to have been incurred as of the July 31, 1991 cutoff date set forth in Sections 6 and 8, and shall be deemed to be a "future response cost" which Respondent shall reimburse in accordance with Section 6.

10. Nothing in this Order is intended to be nor shall it be construed as a release, covenant not to sue, or compromise of any claim or cause of action, administrative or judicial, civil or criminal, past or future, in law or in equity, which EPA may have against the Respondent for:

a) any liability as a result of failure to make the payments require by Sections 2 and 6 of this Order or other failure to comply with terms of this Order; or

b) any liability not expressly included in Section 8 above, including, without limitation any liability for i) injunctive relief at the Site; ii) response costs other than those specifically described under Sections 2 and 6 above; iii) damages for injury to or loss or destruction of natural resources; or iv) criminal liability.

Respondent reserves all rights it may have to oppose and defend against such claims and to assert any and all claims, cross claims and counterclaims it may have against EPA and/or any person or government agency except as described in Section 12 below.

11. Nothing in this Order is intended to be nor shall it be construed as a release, covenant not to sue, or compromise of any claim or cause of action, administrative or judicial, civil or criminal, past or future, in law or in equity, which EPA may have against any person, firm, corporation or other entity not a signatory to this Order.

12. The Respondent agrees not to assert any claims or causes of action against the United States or the Hazardous Substance Superfund arising out of CERCLA response activities undertaken at, or relating in any way to, the Site, or to seek any other costs, damages, or attorney's fees from the United States, its agencies, employees or contractors arising out of CERCLA response activities undertaken at, or relating in any way to, the Site. The Respondent waives any right it might have to seek reimbursement from EPA pursuant to Section 106 of CERCLA, 42 U.S.C. § 9606, for any costs pertaining to the Site.

13. With regard to claims for contribution against the Respondent for matters addressed in this Order, the parties hereto agree that the Respondent is entitled, as of the effective date of this Order, to such protection from contribution actions or claims as is provided in Section 122(h) (4) of CERCLA.

14. This Order shall be subject to a thirty-day public comment period pursuant to Section 122(i) of CERCLA. In accordance with Section 122(i) (3) of CERCLA, EPA may modify or withdraw its consent to this Order if comments received disclose facts or considerations which indicate that this Order is inappropriate, improper or inadequate.

15. The effective date of this Order shall be the date upon which EPA issues written notice to the Respondent that the public comment period pursuant to section 14 of this Order has closed and that comments received, if any, do not require modification of or EPA withdrawal from this Order.

16. The parties have agreed to this Order to avoid unnecessary conflict or litigation. By entering into this Order or by taking any action in accordance with it, Respondent does not admit any findings, conclusions of law, determinations, or any of the allegations contained in this Order, nor does Respondent admit liability for any purpose or admit any issue of law or fact or other responsibility for the alleged release or threat of release of any hazardous substance into the environment. The participation of Respondent in this Order shall not be admissible against Respondent in any judicial or administrative proceeding, except for an action by EPA to enforce the terms of this Order or actions to which EPA is a party which allege injury based, in whole or part, on acts or omissions of Respondent in connection with performance of this Order. Neither the terms of this Order, including any allegation, finding, conclusion or determination set forth herein, nor the active

performance hereunder, shall be used against Respondent as a collateral estoppel in any other proceeding with EPA.

17. Respondent's obligations under this Order shall terminate and be deemed satisfied upon Respondent's receipt of written notice from EPA that Respondent has demonstrated to the satisfaction of EPA that all terms of this Order have been completed.

IT IS SO AGREED:

Intel Corporation

By: _____ 1/24/93
its: Vice President Date

LEGAL OK
01/25/93

The above being agreed and consented to, IT IS SO ORDERED

this 17th day of February, 1993.

U.S. Environmental Protection Agency

By: _____
Jeff Zelikson, Director
Hazardous Waste Management Division
Region IX

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

MAY 4 2011

Mr. Tom Cooper
Intel Corporation, RN-3-65
2200 Mission College Blvd.
Santa Clara, CA 95052-8119

RE: Transmittal of Unilateral Administrative Order; Intel Santa Clara 3 Superfund Site, Santa Clara, California

Dear Mr. Cooper:

Enclosed you will find U.S. EPA Region 9 CERCLA Unilateral Administrative Order Number 2011-08 ("Order") for remedial activities with respect to the Intel Santa Clara 3 Superfund Site ("Site"). EPA is issuing the Order to Intel Corporation ("Intel"), pursuant to Section 106(a) of CERCLA, 42 U.S.C. § 9606(a). The Order specifies the responsibilities that Intel shall have in performing the work required by the Order.

EPA discussed this Order and the accompanying Statement of Work ("SOW") generally with Intel in advance of its issuance, and we appreciate Intel's efforts to communicate its concerns and comments. The Order and SOW as issued reflects our consideration of your input, consistent with EPA's statutory responsibilities and regulatory requirements and the needs of the action.

Under Section 122(e) of CERCLA, EPA may, but is not required, to provide special notice to potentially responsible parties to begin a formal period of negotiation before it issues an order. In this case, EPA believes a formal period of negotiation was not needed, and thus did not provide Intel with special notice, because as stated above, EPA has discussed this Order with Intel informally.

In accordance with provisions of the Order, Intel may request a conference with EPA concerning the Order. Any such request must be made within 10 days after the Order was signed. If requested, the conference will occur within ten days of the request at EPA's Regional Offices. The Order will become effective 30 days after it was signed.

If you have any questions regarding the work required by the Order, please feel free to contact Rachelle Thompson at (415) 972-3962. Legal matters should be directed to Erica Maharg of the Office of Regional Counsel at (415) 972-3943. Thank you for your cooperation in this matter.

Sincerely,

Kathleen Salyer, Assistant Director
California Site Cleanup Branch
Superfund Division

Enclosure

Routing Checklist
CERCLA UAO Package

CONCUR BELOW (initial and date)	Enforcement memo (Notes 1 and 2)	Action Memo (for removal UAOs) (Note3)	Documentation of reasons for not issuing order to all PRPs if applicable (Note 4)	Order (Note 5)	State request letter for UAOs at non-NPL sites (Note 6)	CERCLIS entry (Note 7)	ICIS/ Docket entry (Note 8)	Press Release (Note 9)	Weekly Report Item (Note 10)
Staff Attorney Erica Maharg EM	x	x	x	x	x	x	x	x	x
ORC Section Chief John Lyons	c 7/22/11		c	c			c		c
ORC Branch Chief Dustin Minor	c		c	c					
Superfund RPM/OSC/Civil Investigator Rachelle Thompson	x	x	x	x	x	x		x	x
Superfund Section Chief Lynn Suer	c	c	c	c		c			
Superfund Branch Chief Kathleen Salyer		sign action memo		sign order KS					

AFTER SIGNATURE PLEASE RETURN TO: Rachelle Thompson, 09128
x=responsibility for preparing the document; c=initial to reflect concurrence
Note 1: All memos and letters should be printed on EPA letterhead. Exhibits and companion documents generally should be part of the approval package unless voluminous. A copy of this checklist should serve as the routing and concurrence page.

Note 2: Memo should be from RPM/OSC/Civil Investigator and staff attorney to Superfund Branch Chief and explain the action taken and the basis of liability of the recipient.

Note 3: The Superfund Branch Chief has been delegated the authority to sign action memos, see delegation 14-2.

Note 4: See guidance "Documentation of Reason(s) for Not Issuing CERCLA 106 UAOs to All Identified PRPs" in the branch files. This documentation can be contained in the Enforcement memo or a separate document. For sample documents see Hazardous Waste Database: *Unilateral Orders: Sample Documents for Use Documenting UAO Reform.*

Note 5: The order number is procured by accessing the CERCLA Administrative Docket system on your lotus notes desktop or call the Case Development Team. BC has been delegated the authority to sign orders, see delegation 14- 14-B. See Hazardous Waste Database *Unilateral Orders: CERCLA Unilateral RD/RA Model and 1993 UAO Removal Order.*

Note 6: See Hazardous Waste *Database unilateral Orders: Removals-State Request for EPA to Perform.* If the request is from a non-State entity (e.g. City) include a 48-hour notice letter, See Hazardous Waste Database *Correspondence/Transmittals/10-points: Model State Notice Letter.*

Note 7: RPM and staff attorney should obtain an Enforcement Instrument Markup Report from Eugene Rainwater, complete it and return to Eugene. Other CERCLIS reporting may be triggered.

Note 8: Enter as both case initiation and case conclusion.

Note 9: In most cases, a press release will be appropriate. Staff attorney and RPM should coordinate with OPA and included a press

release where appropriate.

Note 10: For ORC, OECA report goes to Juanita or Rose. Send them an email, specifying report category, with an attachment. Section Chief review is required unless there is insufficient time. Reports are due Thursday by 10am.